

The United States

MOULDER

AND THE MILLING ENGINEER.

Sixteenth Year.—No. 7.

MILWAUKEE, JULY, 1891.

Subscription Price \$1.00 Per Year.

G. M. MANN.

F. P. MANN.

MILWAUKEE · BAG · COMPANY,

MANUFACTURERS OF

COTTON, PAPER AND JUTE

FLOUR : SACKS

DEALERS IN

Grain Bags, Twines, Centals, etc.

TELEPHONE NO. 427.

236 East Water Street,

MILWAUKEE, WIS.

ESTABLISHED 1846.

J. B. A. KERN & SON,
Merchant Millers

Capacity 2,000 Barrels Per Day.

MILWAUKEE, WIS.

Manufacturers of Choice Minnesota and Dakota Hard Wheat Flour.

RYE + FLOUR

By most approved roller process, guaranteed the best and purest rye flour manufactured

WE INVITE CORRESPONDENCE FROM CASH BUYERS.



WHEAT! Clean Wheat!

FLOUR! Excellent Flour!

Guaranteed by using

THE RICHMOND

Grain Cleaning Machinery

AND

DUSTERS.



RICHMOND MANUFACTURING CO.

LOCKPORT, N.Y., U.S.A.



Are you in it?



We guarantee a saving of 25 to 50 per cent
in the cost of lubrication where our

Compression Grease Cups
and **Badger Lubricants** are used.

SPECIALTIES:

Fine Cylinder and Engine Oils,
Extra Roller Mill Oil,
Mill Greases,
Magnolia Babbitt Metal
and Cotton Waste.



WADHAMS OIL & GREASE CO.

MILWAUKEE, WIS. AND SEATTLE, WASH

Correspondence Solicited.



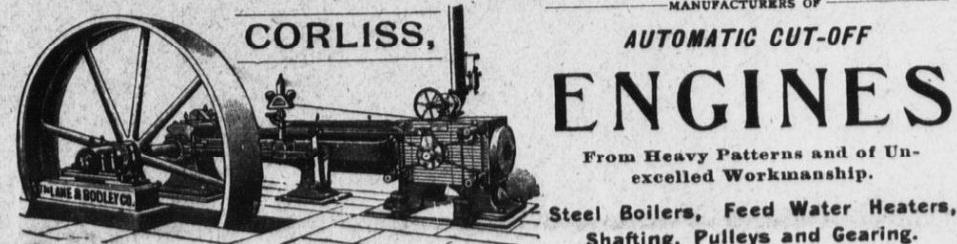
JAMES LEFFEL
WATER WHEELS

BUILT BY
JAMES LEFFEL & CO.

Nearly 30 Years Business
affords every convenience for making Wheels of highest
excellence and

Specially Adapted to All Situations.
Among the Wheels in operation may be found the
Largest and Smallest Wheels
in greatest variety of form, style and finish under the
Highest and Lowest Heads
in this country. Write, stating head, size of stream, kind of
mill. We will send our fine pamphlet, and advise you,
THE JAMES LEFFEL & CO.
SPRINGFIELD,
OHIO. | 110 LIBERTY STREET,
NEW YORK CITY.

THE LANE & BODLEY CO.



MANUFACTURERS OF

AUTOMATIC CUT-OFF
ENGINES

From Heavy Patterns and of Un-

excelled Workmanship.

Steel Boilers, Feed Water Heaters,
Shafting, Pulleys and Gearing.

THE LANE & BODLEY CO., cor. John & Water Sts., CINCINNATI, O.

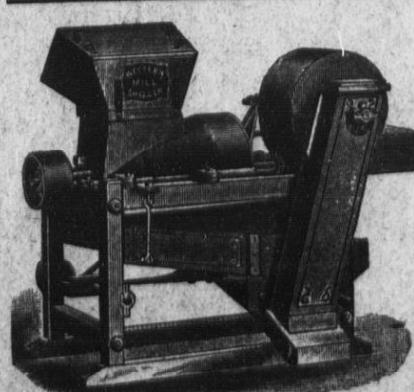


PUMPS FOR ALL PURPOSES

FACTORY OFFICE 46 CENTRAL AVE. ON APPLICATION

CINCINNATI, OHIO. PRICE LIST

BRANCH HOUSE, 1425 EAST MAIN ST., RICHMOND, VA.



... THE ...
"WESTERN"
MILL SHELLER.

The most Compact, Durable, Best Sheller
and Best Cleaner.

Takes up but little room, runs at low rate of
speed, requires no attention. It is in
every respect the

Best Sheller ever offered to the Public.

Please mention this paper. Write for full particulars to

UNION IRON WORKS, - DECATUR, ILL.

Mfrs. of "Western" Shellers, Cleaners, Separators, and all kinds of Elevator Machinery.

A MATCHLESS RECORD!

This Line of Machinery is Used by a Great Majority of the Largest, Best and Most Profitable Mills in America,

AMONG WHICH ARE THE FOLLOWING:

Duluth Imperial Mill, Duluth, Minn.	3,000 bbls.
Washburn-Crosby Co., Minneapolis, Minn.	9,500 bbls.
Pillsbury-Washburn F. M. Co., Minneapolis, Minn.	14,500 bbls.
Jewell Milling Co., New York, N. Y.	1,500 bbls.
Galaxy Mill Co., Minneapolis, Minn.	1,500 bbls.
Cataract Mill, Minneapolis, Minn.	750 bbls.
Daisy Roller Mill Co., Milwaukee, Wis.	1,500 bbls.
Sumner & Stewart, Staten Island, N. Y.	2,000 bbls.
Union Mill Co., Nashville, Tenn.	2,500 bbls.
Lake of the Woods Mill, Kewatin, Ont.	1,500 bbls.
Colorado M. & E. Co., 10 mills, Denver, Col.	2,500 bbls.

RECENTLY ADOPTED BY THE FOLLOWING:

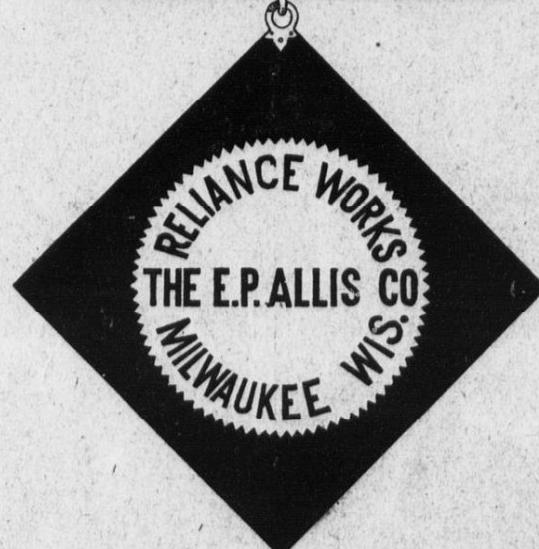
Crown Roller Mill, Minneapolis, Minn.	2,500 bbls.
Washburn-Crosby "A", Minneapolis, Minn.	4,500 bbls.
Columbia Mill Co., Minneapolis, Minn.	2,000 bbls.
Zenith Mill Co., Minneapolis, Minn.	1,000 bbls.
Jones & Company, New York.	2,500 bbls.
Listman Mill Co., LaCrosse, Wis.	1,000 bbls.
Model Mill Co., Nashville, Tenn.	1,000 bbls.
Mountain City Mill Co., Chattanooga, Tenn.	800 bbls.
Thompson Milling Co., Lockport, N. Y.	500 bbls.
Moseley & Motley Milling Co., Rochester, N. Y.	600 bbls.
L. M. Godley & Co., Scottsville, N. Y.	250 bbls.

1891 Catalogue now ready.

THE EDW. P. ALLIS COMPANY

* Flour Mill Builders and Furnishers, *

RELIANCE WORKS, MILWAUKEE, WIS.



The United States MILLER AND THE MILLING ENGINEER.

Sixteenth Year.—No. 7.

MILWAUKEE, JULY, 1891.

Subscription Price, \$1.00 Per Year.

SEPARATIONS AND PURIFICATIONS.

BY JONATHAN MILLS.

THIS subject is the most complex in the science of making flour, as milling is rapidly approaching a true science and is entirely too deep a subject for the thousand and one amateurs that we nowadays so frequently meet. I feel incompetent, with all the varied experience I have had, to treat the subject in a proper manner without taking too much of your valuable time. It would require more than a dozen lectures, with lines of samples and a good set of hand-sieves, taking in the whole gamut of bolting silks, to properly demonstrate the true importance and show up the true science of separations, and then, after all that was done, it would but show you the results on one grade or kind of wheat. If the results were shown on our soft winter wheat, it would require a different clothing of silk to show you what was best for hard or spring wheat. Our white wheats, and such wheats as are grown in California, Oregon, Washington and Colorado, would require another grade of clothing. Then, if we clothe a mill for perfect work that is operated along our lakes or on the sea coasts, and could transplant the same mill back 50 or 100 miles away from the lakes or ocean, it would not work satisfactorily, the separations would not be right. So you see a mill has to be clothed to suit dry or damp atmospheres. The atmosphere is at all times more humid along large bodies of water than in the interior of the country. Remove an Evansville mill bodily without any change of cloths or other changes to the east side of any of our large lakes, in the humid atmosphere of the lakes, and its capacity would be reduced at least one-third.

To illustrate this fact, we will say a reel in an Evansville mill might have 24 inches of No. 8 cloth on the tail to dust out the stock so it would pass over the tail dry. (You all understand the term "dry," I believe.) Remove the same reel and stock to the lakes, and you would require not less than 36 inches of No. 7 cloth in place of the 24 inches of No. 8; and this principle holds good on about every cloth in the mill. Successful separations can only be accomplished by a continuous system of scalping off the coarse from the finer stock repeatedly, and this system holds good on all wheat—hard, soft or white, and in every climate, dry or humid. Every separation is more or less of a purification.

I will now take up purification, and briefly describe the proper manner, as I see it, to get the best results. The true principle and the only satisfactory one is to grade your middlings into as many grades as there are grades of cloth. The only man that I know of who is carrying out this system to its fullest extent is the Honorable Homer Baldwin, in his City mill at Youngstown, Ohio. He is purifying middlings

that have passed through a No. 14 silk and been dusted over a No. 16 silk, and is making a larger percentage of very high-grade flour than any other winter-wheat mill in America, and making a barrel of flour out of fewer pounds of wheat. A good way is to grade your break middlings into not less than five grades, and handle each grade on a separate purifier. After they are purified, they should be lightly reduced or sized on your smooth rolls, the flour bolted out, and the un-reduced middlings again purified and again bolted. The middlings that are tailed over the bolting reel should again be purified. This should be carried out with all grades of middlings by using a tail cloth on these middlings bolting reels of a fineness to send over the tail nothing but the heaviest of the middlings; you then have a middlings through the tail cloth on each reel that should be sorted with a view of quality, or rather color, by doughing, and ascertain which of them you consider fit to again be reduced for patent flour. But all should be purified, and similar qualities can be brought together of the same grade and re-purified together on a purifier for the purpose.

The day is rapidly approaching when a true system of sorting of middlings for color by doughing will be adopted in all first-class mills. Nothing is so deceiving to the eye as some grades of middlings, and the same grade from one grade of wheat will not be equal in color to some other grade of wheat, and both wheats may have passed as the same grade when you bought it. The fine discrimination of the miller's judgment can only be proved by his eternal vigilance, and by constantly testing his middlings for color by doughing. The greatest danger in letting middlings into your patent flour lies right in your various fine middlings from the reductions of the middlings. I merely give these points to set millers on their guard and to point out where the trouble may exist, in holding their patent flour up to a high standard, and how to keep it there in uniform grade and constant.

It is just as important, and I think more important, that the middlings left from the reduction of the middlings be purified, then the purification of your first or break middlings, and the lighter you reduce your break middlings, and each successive reduction, and purify the remainder at every step, the better results you will get. This is a fundamental principle that will always command a market and bring profit in close competition.

There are already to many "sooner" mills in this country for the good of the trade. This is largely brought about by the millers wanting to build mills for a cent, and each furnisher swears he can do it with a reel and a roll less than the other fellow, and stands ready to guarantee to make the sun stand still if they don't beat the

world and the other fellow. If these "sooner" mills are ever all paid for when completed, they are universally piling a mortgage on themselves by loss in yields, and at the end of the first year or two you find complaints that milling is awful close, and they begin to hustle to put in every jimmie-crack of a machine that is offered that they think will help them out, but generally go to the tail of the mill to commence.

The way to get a good week's work done is to commence early Monday morning and do your hardest work every day of the week. You need not expect to lose Monday, Tuesday and Wednesday, and do as much work in the week as the fellow who commences early and does all he can every day in the week. This illustration applies with double force when it gets down to a "get-there-sooner" mill and starts in after the other fellow has done half his week's work.

THE WHEAT SUPPLY IN EUROPE.

IT has never been more difficult than it is now to speak with exactness regarding the European supply of wheat and the probable demand. The statements published this year are singularly contradictory, and even from official and the most reliable sources estimates varying very widely are issued. Thus one statement recently published is that Russia will have no surplus of wheat for export, while another from equally good authority announces that Russia will have a fair crop, which means a large quantity for export. The accounts in regard to the probable yield in Germany and also in England are almost equally irreconcilable, while French authorities are themselves widely at variance. It is probable that these divergent opinions as to the supply of wheat this year are in part due to the great controversy in France and in some other countries respecting the duties on imported grain. The anxiety of the farmers to secure the highest possible duty is not unnatural, and it prompts many people to represent the probable supply as large as possible.

On the other hand the opponents of high duties, and particularly those who represent the trades unions and other bodies of consumers, lay great stress upon the probable scarcity of wheat this year, in order to strengthen their argument for at least a temporary reduction of duties on imported grain.

A statement from Mr. Griffin, United States commercial agent at Limoges, announces that the National Millers' Association of France has carefully collected data of the probable wheat harvest of France and Europe for this year, and forwards the figures. This statement shows that the average need of wheat in France for seed and food is 123 million hectolitres yearly, but this year 5,000,000 hectolitres must be added for resowing where the grain was frozen or injured, making a total

of 128 million hectolitres. The estimated yield this year is but 82,779,000 hectolitres, if the weather and all other conditions from this time forward continue favorable. The dispatch adds, "This is the maximum estimate; it will be 31 per cent less than the harvest of 1890, leaving a deficit to be supplied by importation amounting to 40,221,000 hectolitres. The average price paid for wheat under favorable circumstances is 23 francs per hectolitre; consequently 925,000,000 francs will be spent in the next twelve months for wheat."

It is a somewhat serious matter for France to face an expenditure of a sum so enormous, at a time when a large portion of the people are embarrassed in their circumstances by the failure of crops, or by other industrial causes. It is not strange that, under such conditions, the controversy regarding the duties on grain has become quite bitter, and the advocates and opponents of the extreme duty are charging each other with improper motives. If the supply of wheat in other portions of Europe were as large as usual, there would be less risk of failure in meeting the demands of France, but according to all accounts there will be a considerable deficiency in Europe outside of France or Great Britain. The British imports are always large, and according to present reports are likely to be somewhat larger than usual this year. The estimate of the National Millers' Association of France is that the production of Europe in 1890 was 225 million hectolitres, and the estimated production this year is but 111 million hectolitres, leaving a deficit to be supplied by foreign countries amounting to no less than 114 million hectolitres. The statement adds "Russia, Tunis, Egypt, Roumania, and some of the Danubian provinces will have a fair harvest; in Hungary it will be below the average this year." But it must be remembered that other statements from equally as good authority indicate that the Russian harvest will be decidedly below the average.

BUSINESS PRINCIPLES.

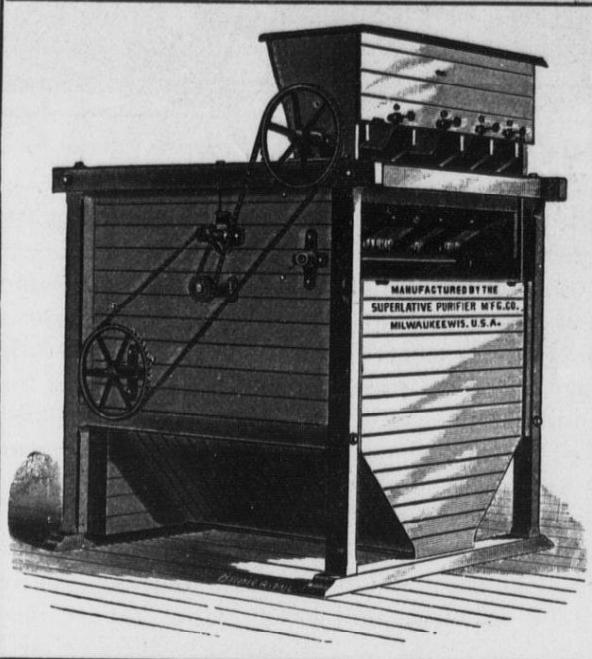
Experience teaches that it is always best to do business on business principles, no matter with whom it is done. It is a good plan to make a memorandum of any contract you undertake, either for the payment of money or an agreement to do a piece of work. It often saves annoyance in case one or the other forgets the terms. Never hire a person and set them to work without first having the price fixed upon. Many law suits have arisen from such neglect. Never sign a paper, no matter how simple a matter it may appear to relate to, without first carefully reading it, and if you do not thoroughly understand it, have it explained before you sign it. These are simple rules, but they are the only safe ones to do business by.—Manufacturer's Gazette.

WHEN BUYING A SCALPER, BE SURE AND GET THE . . .

NEW ERA SCALPER

IT WILL BE MONEY IN YOUR POCKET IF YOU DO. . . .

It is thoroughly reliable and durable, and requires little attention. Produces a whiter break flour, more patent and less low grade. WE GUARANTEE SATISFACTION AND ALLOW TRIAL.



Occupies small space and requires nominal power. Has immense capacity. One machine handles four breaks in 100 bbl. mill, or one break in 500 bbl. mill.

WHEN this Scalper was put on the market three years ago, its success was immediate, and its merits were recognized by every practical miller who saw it in operation. Naturally other machines sprung up, which were extensively advertised as "just as good as," but they have proved a source of worry and expense to the user, and we can count up a dozen of them that are never heard of now. The New Era on the contrary has given satisfaction wherever used, and where one goes, others follow, as its merits become known. We have any number of testimonials of its merits from millers in all parts of the country. Draw your own conclusions.

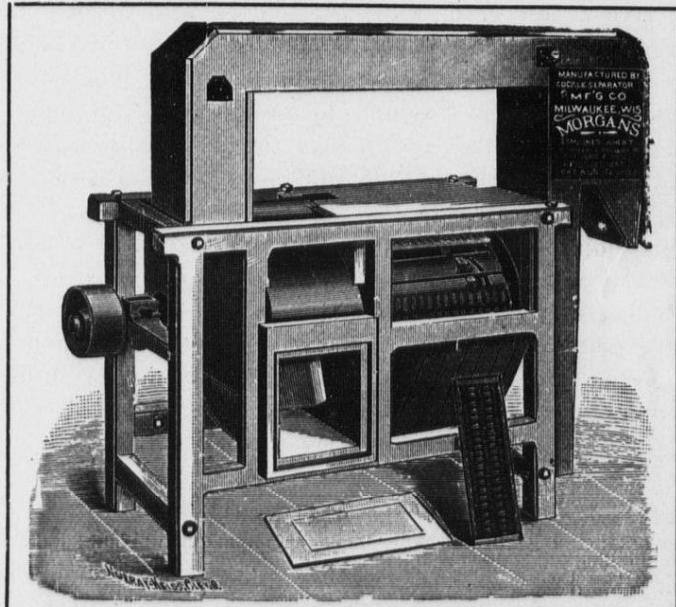
PRICES ARE WAY DOWN.

For Catalogue and further information address,

**SUPERLATIVE PURIFIER MFG. CO.,
MILWAUKEE, WIS.**

We are still "In It" with two of the best Grain Cleaners manufactured.

THE MORGAN SCOURER



Both Upright and Horizontal Machines, manufactured with or without Shoe. . . .

THIS machine has always been recognized as one of the most thorough, durable and reliable Scourers built. The only objection ever raised against it was its price. This objection is now overcome, as we can offer prices as LOW AS THE LOWEST. Consult your own interests and get a first-class machine, especially since it costs no more than the inferior scourers.

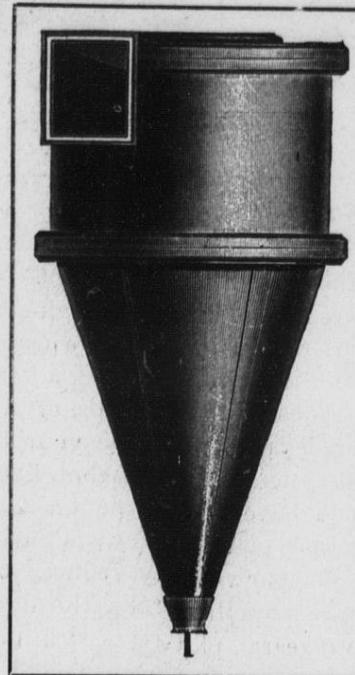
FOR CATALOGUE, PRICES, ETC., ADDRESS

**COCKLE SEPARATOR MFG. CO.
MILWAUKEE, WIS.**

THE VORTEX DUST COLLECTOR

Known and recognized as the best Collector for all uses on the market.

BUILT IN
FIRST-CLASS
STYLE.
GUARANTEED
TO GIVE
SATISFACTION.
TRIAL ALLOWED.
PRICES LOW.



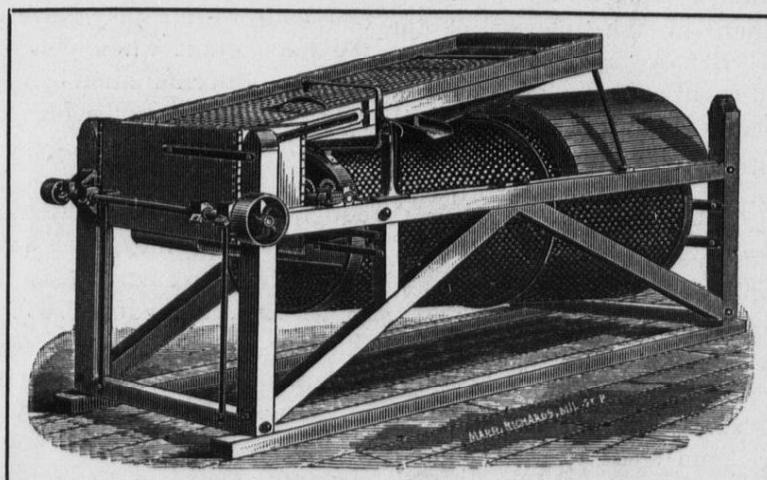
FULLY PROTECTED
BY PATENTS.
IT INFRINGES ON
NO OTHER
MACHINE, AND
WE GUARANTEE
INDEMNITY
AGAINST
PATENT SUITS.

THE merits of this Collector are shown by our constantly increasing trade among both millers and mill furnishers. No inferior machine could show such results after three years of trial.

FOR CIRCULARS, PRICES, ETC., ADDRESS

**VORTEX-DUST-COLLECTOR-CO.,
MILWAUKEE, WIS.**

The Kurth Cockle Separator



If you want a Cockle Separator, write us. We can satisfy you both as to style and price. We build machines with reel or shaking graders, and with steel or zinc cylinders, as desired. Also in connection with Richardson's Dustless Oat Separator Attachment.

PRICES GREATLY REDUCED.

WE are manufacturers of Perforated and Indented Metal, and solicit orders for anything in this line, which we can fill promptly.

UNITED STATES MILLER
AND THE MILLING ENGINEER.

E. HARRISON CAWKER, EDITOR.

PUBLISHED MONTHLY.
OFFICE, NO. 124 GRAND AVENUE, MILWAUKEE.
SUBSCRIPTION PRICE—PER YEAR, IN ADVANCE.
To American subscribers, postage prepaid..... \$1.00
To Canadian subscribers, postage prepaid..... 1.00
Foreign subscriptions..... 5s.
All Drafts and Post-Office Money Orders must be made payable to E. Harrison Cawker.
Bills for advertising will be sent monthly, unless otherwise agreed upon.
For estimates for advertising, address the UNITED STATES MILLER AND THE MILLING ENGINEER.

[Entered at the Post Office at Milwaukee, Wis., as mail matter of the second-class.]

MILWAUKEE, JULY, 1891.

We respectfully request our readers when they write to persons or firms advertising in this paper, to mention that their advertisement was seen in the UNITED STATES MILLER AND THE MILLING ENGINEER. You will thereby oblige not only this paper, but the advertisers.

THE Michigan Millers' Association had a very interesting meeting at Lansing, July 9.

THE pilgrims on that wonderful European excursion of American millers have nearly all returned.

A FARMERS' Elevator Company in Minnesota claims to have realized 125 per cent. in the last two years.

THERE is much complaint of inactivity in trade. Money is plenty and can be borrowed at reasonable rates but the business demand for it at the present moment is not great. A little later on there will be a change.

OUR Chicago contemporary has just discovered that there are frequent spots to be found in many samples of bread. He should either wipe the dust from his spectacles or buy a purer article of flour for his private consumption.

WE regret to announce the death of Mr. Liberty Hall of Kansas City, Mo. He was the father of C. F. Hall and was associated with him in conducting the *Modern Miller*. He was a vigorous writer and a man of sterling character.

THE latest Alliance notes are to the effect that the farmers of Kansas and Georgia are going to store their grain to effect a shortage in the market also the Georgia planters will hold back their cotton. We do not believe the report to be true.

JUNE 30th, Mr. Charles Howard Dorsey, of Baltimore, was married to Miss Leila Ristau of the same city. The ceremony took place at Grace church. We congratulate the newly married couple and trust that a long life of happiness lies before them.

IT is funny to see how the milling papers "flop" every once in a while on the Millers' National Association question. It makes little difference to the Association how they write as the members appear to be well satisfied with the present condition of affairs.

THE Lockwood Press of New York has just issued the second part of the "American Dictionary of Printing and Book Making." All who have examined it pronounce it to be one of the most valuable publications ever issued for the benefit of the printing and book making trades.

ON what we supposed was reliable authority the announcement was made in our last issue that the owners of the Mechwart roller mill patents had brought suits against The John T. Noye Mfg. Co., of Buffalo, N. Y., and the Stillwell & Bierce Mfg. Co., of Dayton, O. It appears upon close investi-

gation that no suits whatever have been commenced under these patents and we regret having made the announcement.

A MEETING of Missouri and Kansas Farmers' Alliance men will be held July 16, for the purpose, it is said, of seeing how the farmers can get the highest price for their grain this summer. Movements of this nature have been made in secret meetings all over the country, and it is rumored that there is an immense scheme afoot to induce all the Alliance farmers in the country to hold off their wheat until the last possible moment and then sell it at a fixed figure much above the present market price.

THE opportunity for testing one of our new cruisers in actual war has passed by, the Chilian insurgents having surrendered the runaway steamer Itata without a contest. Of course war is to be deprecated, and it is well that a fight was avoided, but while the public generally acknowledges that fact, it is somewhat in the position of a boy with a new knife, and would not have been sorry for a chance to see one of its new ships put to the test, a feeling not unnatural, though somewhat illogical.

In the chase the Charleston proved herself a good sea boat and a fast steamer. The criticism made on her in some quarters for not catching the Itata are hardly well founded, and indeed are made chiefly by persons who do not realize the difficulty of finding a ship which has the start to begin with, and the whole Pacific Ocean on which to select her course. The chase must be wholly by guess-work, and the chances are tremendously against the pursuing ship, no matter how great an advantage she may have in speed.

THE Executive Committee of the Millers' National Association for 1891-2, held its first quarterly meeting in Chicago, June 27, 1891. After formal action upon the minutes of the preceding session, the subject of the Tracing Bureau was taken up and arrangements made for putting the same into operation on July 9th. Action in regard to "tricky and irresponsible dealers, cancellation of orders on flimsy pretexts, etc., which is the province of the Committee on Domestic Trade, was deferred, pending some investigations into the subject. It was decided to closely watch the matter of drawbacks on export burlap bags, and if necessary, prompt and vigorous action will be taken by the National Association.

In view of the bond of the Consolidated Roller Mill Co. in the sum of \$100,000, under which that company is bound to defend any suits brought against members of the association, arising from the use of machines manufactured under their patents, and as the matter is an old one which has arisen after some years of rest, the committee did not deem it necessary to take any action in regard to a claim for royalty as set forth in a circular letter, which is being distributed by a patent expert of New York. A claim against the P. C. & St. L. Ry. Co. for loss of a car-load of flour in the Johnstown flood of 1889 (it is said), was assumed by the National Association,

which took similar action in reference to a claim against the Anchor Line for delaying the shipment of a certain invoice contracted for special delivery. Suit will be brought against the steamship company.

AFTER giving its readers a much needed rest from its customary billingsgate and abusive language for a few weeks, our Minneapolis contemporary seems to have broken out with refreshed energy upon the return of Willie from his European trip, and the Millers' National Association is the victim upon which the manager, editor, general supernumerary and office boy of *The Northwestern Miller* now vents his spleen.

Why this sudden change of heart and flop from the much vaunted champion of the old National to its most implacable enemy is not hard to discover for one who is acquainted with all parties interested. Possibly Willie's toes have been stepped upon and in accordance with his well known policy of rule or ruin, finding that he cannot do what he wishes with the Executive Committee, he forthwith tries to do the other thing.

If his efforts to work injury to the cause of organization among millers meet with the same results that some contemporaries have attained in the same direction in the past,—and we predict that they will—there is no great amount of satisfaction awaiting as a reward therefor. *The Northwestern Miller* has in the past through its energy and enterprise made many friends, but the silly, puerile stand taken by it now as a vain attempt to appropriate and claim credit for a scheme which has been talked of by the Millers' National Association, and was put in practical operation by many of its individual members, even from the days when Willie peddled papers on the road, is too absurd to call for anything but contempt and unless Publisher Palmer muzzles his over enthusiastic employe in the near future, the effect of his gambols will, we think, be felt by him in dollars and cents, at no distant date.

* * *

While the attempt of the *Northwestern Miller* to break up the Millers' National Association, and start a new one of its own is not worthy of much attention and probably will have little or no effect upon millers, who, appreciating the benefits of the organization, are members of the National Association, we cannot refrain from calling attention to the absurdity of its position in the matter.

Reference to the files of the *Northwestern Miller* during the past few months, renders it difficult to reconcile its present position with sense or reason. It has ostensibly been endeavoring to aid the National Association in its efforts to organize a Flour Tracing Bureau, until their efforts have resulted in the formation of an Association which though not as strong and broad as it should be, is still a creditable step in the right direction. A start has been made which is a good point gained and now the *Northwestern Miller* turns and from a policy best known to its editor opposes the movement, "tooth and toenail," prints ten trite reasons therefor, which are all decidedly weak at the best and demonstrate nothing but a sentiment of personal jealousy or disappointment at something, and casts slurs and sarcasm at the Executive Committee and officers who have worked hard and earnestly for the benefit of the milling industry of our country.

Now comes the last issue of the paper with a scheme to abandon the National Association and form a new organization, which is to bear a name that jingles pleasantly in Willie's ears, because he really did invent that much of

the scheme and which is to have the same ends and objects of the old National Association.

In the name of common sense, if the old National Association is not what it should be in the opinion of the millers of the United States, what is there to prevent the coming into it and making it whatever they desire?

The doors of membership are open and its constitution, officers and entire outfit may be changed and altered to suit the will of the majority at any annual convention.

Abandon it and surrender its valuable licenses and arguments—What for?—Simply to give a new name to an organization composed of the same old members, rendering the same listless support that has made it impossible, except in times of great emergency where patent litigation threatened to maintain a thorough and business-like organization of flour manufacturers.

But the idea is too absurd for further comment.

THE N. Y. *Commercial Bulletin* in a recent number says: Secretary Foster's announcement that the Government will proceed with the coinage of the trade-dollar bullion and recoinage of subsidiary silver, and that "therefore the question of the continued coinage of silver dollars as heretofore is not a practical one at present," is evidently the result of an earnest contest in the Cabinet, and is, in a sense, a postponement. If a complete postponement were possible, and all question and anxiety about the soundness and conservatism of the financial policy of the Government could be laid aside until after the currency requirements of the summer and autumn have been met, and the return of gold from Europe begun, it would be a very great gain. But, unfortunately, this is not possible.

It seems to be generally believed that the President has returned from the West strongly impressed with a desire to comply as far as possible with the wishes of factions whose advice, if followed too far, would, he knows, involve consequences that he cannot afford to face. The question, therefore, at once arises, how far these dangerous influences are to be permitted to interfere with the clear and plain course of conservative and prudent financial administration. Such a question cannot really be postponed. There seems to be good reason to believe that the responsible Treasury officials recognize the folly and danger of a departure from well-established lines of prudent administration, and that there was at least influence enough in a recent Cabinet meeting to prevent for the present a decision that would commit the Government to a reckless course, and this much is reassuring; but, on the other hand, it is apparent that there was a strong influence in favor of the reckless folly and illegality of continuing the regular monthly coinage of standard silver dollars, and sacrificing every consideration of sound and prudent policy, at a time when such a decision would be peculiarly unfortunate.

That this question is merely postponed, is the unmistakable meaning of Secretary Foster's announcement. This means that for some weeks or months the West is expected to assume that the final decision will be on the way, while the East is expected to rest assured that it will be the other. The Administration probably fails to realize that, at the present moment, with big crops in prospect and conditions naturally favorable to active and prosperous business, one of the principal causes of depression, distrust and uncertainty, is the existence of just such dangers as are threatened by the announcement from Washington of a mere postponement of the question whether the fight for sound, safe and honest finances is to be carried on firmly and confidently, or whether there is to be a surrender that involves disturbance and ultimate disaster.

CORRESPONDENCE.

The following letters are all from our own special correspondents, and reflect their views and the views of the trade in the location from which they write.]

OUR BUFFALO LETTER.

WITH few exceptions the big and small traders throughout this great country are looking for heavy receipts of the new crop of wheat, and naturally predicting the lowest prices ever known for this cereal. Europe, too, is of the same opinion, going so far as to refuse our flour in the hopes of buying it cheaper later on. Taking the prospects as presented today they are truly glowing, but it would be no surprise to see the course of the market turn contrary to all expectations, an anomaly in fact. Our wheat will be wanted in enormous quantities by millers at home, to say nothing of the foreign demand which has spoken for it long before harvest.

The only cloud in the bright prospect is a tight money market, but this contingency with the great efforts now being made by bankers to secure the necessary funds and the increase in banking capital in the last ten years is reduced to a minimum. Taking everything into consideration I look for higher prices for the new wheat until the demand is well supplied.

The estimate of 600,000,000 in my opinion is within the limit. The quality of this crop is also assured being far superior as a rule to anything within the last five years. This is another argument in favor of higher prices, as a poor crop is always followed by an easy and steadily declining market. In 1879 a big crop was followed by a much larger demand, creating an activity which caused a sharp advance in prices and why may not history repeat itself this year.

The sensation of the month was the fire at Urban's Mill on Tuesday, June 23d. The upper story was discovered to be on fire about 4 o'clock in the morning and some reports state a loud explosion was heard soon after the smoke was seen issuing from the cupola. It seemed as if the building was doomed before the firemen arrived owing to the great headway made by the flames, but with the improved apparatus of the Buffalo department the damage was principally confined to water. The loss was fixed at \$40,000, covered by insurance. Only a small amount of flour and 3,000 bushels of wheat were in the mill at the time, the bulk of the flour, about 9,000 bbls. being in the warehouse out of the reach of either fire or water. Mr. George Urban was at the mill almost as soon as the firemen although his residence is fully five miles from the center of the city. It was a wild ride but with a son of Jewett's Jerome Eddy, 2:16 $\frac{1}{4}$, and a clear smooth road, it was just the sort of excitement Mr. Urban thinks "comes but once in a lifetime." At noon he was on change wearing the same pleasant smile. George Urban is not one of the "pretty men" of the board but he is one of the most manly, dignified, straightforward, liberal-minded gentlemen of the whole 550 members, none of whom would for the world have missed the opportunity of offering sympathy in his late loss or if necessary placed his bank account at the disposal of such a man as Mr. George Urban Jr.

It will take three months to put the Urban mill in shape for business again but with a fair supply of flour on hand and the leasing of the Frontier mills from Messrs. Schoellkopf & Mathews,

customers will not suffer for the want of their favorite brands.

Mr. H. J. Harvey of the Queen City mill and John Esser of the Marine, were before the Canal committee investigating the mismanagement of that great water route. Of course they testified no injury would result from the giving away of a valuable strip of water front to a lot of greedy politicians backed by a number of no less greedy capitalists. Both the millers are interested in this scheme.

Mr. C. P. Flatley, the newly appointed agent of the Duluth Imperial Mill Co. of this place, has discovered that flour is good canal freight and that money is saved in shipping it to New York by that route. His first shipment made two weeks ago reached its destination in good order and the next was shipped as soon as that was heard from. The cargos consisted of 200 tons, in export sacks of 140 and 280 lbs each. In 1886 Pillsbury brought the railroads to time by sending 8,000 barrels through to New York in canal boats and it is not unlikely that the new agent of the Imperial will be seen before his next load goes out, although he declares the roads cannot carry it for the same money, the charges being about one-half that asked by rail.

It is reported that car service charges are "winked at" to a few favored shippers. When cars are wanted to carry grain east from the harvest fields which will be the case in a few weeks, there will be some skirmishing among the railroad agents to hustle the boys and favors will be unknown. Rail transportation will be more deficient this year after the new crop commences to move than ever before.

The new storehouse for Pillsbury's mills is completed and the flour sister will be in operation in a few days together with the other machinery necessary for the repacking of flour damaged by transportation.

The Duluth Imperial Mill Co.'s warehouse is far from completion, in fact the dock is only started. It will take some months yet before this enterprising company can store flour on their own property.

Mann's floater, or the "toboggan slide" as it is called by those who have been so unfortunate as to consign cargoes to it, to be transferred into canal boats, is still looking for foolish cheap-Johns. This elevator was built for a "strike" as a vesselman was honest enough to declare on 'change. "If it had been built to bust" the association, I would have been willing to help it along in its most laudable work but it was put up see how much the owners could get out of the association. They don't want to break the association because that would end their prospects of getting a slice of the swag."

The following new members of the Exchange have been elected: Deloss Graves, forwarder; P. H. Griffin, car wheel builder; M. Purcell, grain merchant.

Assistant Daly, of the Merchants Exchange, has not yet reported for duty and the prospects are not good for his early appearance at his desk.

The large number of "posted" members for non-payment of dues excites no little comment especially as the list shows no signs of growing smaller.

The bureau for tracing consignments of flour, according to President James of the Millers National Association, will start its labors some time in the fall. He intends to give it a great push when the time comes. "Lon" is equal to any

thing even to the making of a most excellent democratic stump speech. "Grover" and "Lon." Keep still my heart.

Syracuse has at last been successful in getting Skaneateles lake water and the morning the good tidings were announced, Mr. Simons came down to his office, although suffering excruciating agony from rheumatism. Mr. Simons was the only man who was willing to bet his all that Syracuse would get this water in spite of the canal opposition. Old Niles Case could not be found for a week after. Hurrah for Simons—he's always right, especially on the grain markets. There are few people in this country so well known among millers as Phillip Houck & Co., and with all this not a half dozen friends of the senior member of this firm are aware that he fought and bled for his country during the late unpleasantness. Capt. Phillip Houck, of the 65th artillery, is his title. Capt. Houck was as successful in war as he has been in business. His men all came home but the fact that none were injured did not prevent the whole crowd getting pensions.

Buffalo millers are again agitating the question so troublesome in this market for years viz: The suppression of order canceling fiend. Not one of the millers or agents here are without a long list of firms representing this class of bogus business men. An order is booked from an apparently responsible firm for flour but as soon as the market shows signs or has declined sufficiently to scare the "merchant" he telegraphs to cancel his order. If the market should advance it is different; the amount was doubled that stated in the dispatch. Of course a miller once fooled will not sell such a skunk another barrel of flour at any price, but this does not prevent him from playing the same game on every miller in the country. A system of sending the names of these frauds to every miller in the association should be adopted. The Buffalo Produce Exchange suffered great losses for years until a system of checking up accounts was adopted and firmly adhered to. A customer not settling for purchases on the Monday following is "posted" and a slip is dropped to the office of each member of the Exchange notifying him that no trust be given to —. This has effectually rid the market of tramps who for years plundered every merchant in his turn. Some such system would work to the great advantage among the Buffalo millers.

Millers whose hearts have been heavy for some months past are greatly elated when inquiries are received from large dealers in flour at Albany and other eastern points asking for prices. New York agents of Buffalo mills also report a big improvement in the demand for old flours which is a great boon to those who have had large quantities in store there for three months or more. It is just as I predicted in my last. The stock of flour will disappear much faster than it accumulated and at prices which will at least let the miller out whole. Prices for a month past have been very unsettled; no attempt to stick to card rates being made. Every mill had its own price and was willing to shade that. The mills have all been running with the exception of one or two unimportant ones and singularly, too, no heavy supply is reported on hand in either of them. Spring patents sold at 5.40 and 6.65: straights 5.00 and 5.25; low grade 3.50 and 4.00. Winter best 5.15 and 5.30. Rye flour sold as high as 5.10 but is considerably

easier at present although 4.90 was refused for a round lot this week. Rye was never so scarce as it is this year and millers are not anxious to purchase this cereal in any sized lots as the crop in this state is reported in fine condition and will be ready to harvest before the 20th of this month.

John R. Weld is a regular visitor on 'change and a keen buyer of our choicest samples of winter wheat. It takes him all day to make his selection but when it is done he has the best offered and is not "stuck" on the price either. He is just a little too close a buyer to please the young crowd.

The canal is falling behind every day and the low rates of 2 $\frac{1}{2}$ on wheat, 2 $\frac{1}{4}$ on corn and 1 $\frac{1}{2}$ on oats it is difficult to see how the boats are kept moving. Rates have several times been advanced with the result of giving the rail the best lots and when this was discovered down would go the prices only to find there was nothing to carry. The rail route has also shown a falling off in grain but the increase in flour fully makes up the deficiency.

Millstuffs are active and unusually steady for this season of the year. Heinold & Rodenbaugh last week sold 65 cars of sacked bran at \$17 and \$17.25 per ton and still had orders on hand. Coarse mids. sold at \$21 and \$21.50 and fine at \$23 and \$24. The same firm is making a good thing in hay, having about 1,000 tons still on hand which is going to New York at prices netting a liberal profit.

No. 1 hard wheat has for a few years past gradually lost favor and today No. 1 northern rules the roost. Little is being done in the former grade and when transactions are made it is usually at price so near No. 1 winter that the difference is not noticeable. Sales of Duluth wheat in this market up to within a week have been at so much over Chicago. Lately the limits have been 16 over Chicago December for No. 1 hard, 13 for No. 1 northern and 10 for No. 2 northern, but as a rule these prices were shaded, the orders being to "sell as low as your neighbor." This caused no end of strife for trade and many fine bargains were secured.

The Buffalo Merchants' Exchange is now supplied with electric light. Instead of having a pair of big chandeliers a dozen small mandarin caps adorn the ceiling which entirely spoils the effect intended to be produced by Mr. Wm. Cornwall the artist.

The new Wells elevator is well under way and will be finished by October 1. Its capacity will be 500,000 bushels and the builders have taken advantage of all modern improvements to make this the best elevator in Buffalo. The cost will be in the neighborhood of \$130,000.

Mr. James Rodebough of the firm of Heinold & Rodebough purchased a new white felt hat the other day and within half an hour after it and the gentleman appeared on 'change he received the following dispatch from Chicago:

James Rodebough,

Merchants Exchange:

"Where did you get that hat?"

Hutchinson."

The reply was quickly sent (collect):

P. B. Hutchinson,

Chicago:

Bought it on the profits of your advice that wheat was a purchase and would go to \$2 per bushel."

A boy brought the message back saying the Chicago party refused to receive it and the charges must be collected of H. & R.

The Buffalo millers who "banked" heavily on high prices of old wheat before the new crop would be fit for use are sadly left. Never take a pointer from Chicago is all the advice necessary.

President Meadows of the new Metropolitan bank of Buffalo is deep in the mysteries of that business and has not shown up on 'change since the bank opened on the 1st of July. His presence will be missed by a few.

If the Buffalo correspondent of a certain milling sheet in the northwest will meet the Buffalo correspondent of the UNITED STATES MILLER between two days in Boston, satisfaction will be guaranteed. Weapons, stockings filled with shorts, distance twenty paces. Or if preferred a column or two of his padded Buffalo chips against a stickful of the readable matter from the UNITED STATES MILLER, he to choose the judges if the latter contest is accepted. As Sir. John A. McDonald would say: "My dear boy, you're not right in the head."

OUR ST. LOUIS LETTER.

PROBABLY the item of greatest interest to the milling world to come from St. Louis this month will be the indictment of Mr. J. B. M. Kehlor, of Kehlor Bros., by the United States Grand Jury at Springfield, Ill. It was claimed that Mr. Kehlor has violated the Interstate Commerce law; the claim being based on the testimony of a discharged Wabash railway clerk. It is claimed that a commission has been paid Mr. Kehlor for his business. For some time testimony has been taken from clerks, etc., but the principals have not been called before the jury, as that body cannot indict the witnesses who come before it.

Mr. Kehlor's cashier, Mr. Ellis, was called as a witness, about the first of this month and later Mr. Kehlor and Mr. Knight, of the Wabash, were notified of their indictment. Without waiting for the serving of the warrants both of them took the first train for Springfield and there gave the required bond for their appearance at the next court term. As this case is practically the first good one to come up before the courts it will be carried out very strongly by the Interstate Commerce people. As the law decides that every bill of lading on which a rebate has been paid is subject to the \$5,000 fine and two years' imprisonment, and as the court appears to be in possession of not a few such bills of lading I am afraid, if the charge is proven that it will not go very easy with the gentlemen indicted. As rumor has it, several flour shippers are guilty of the same offense and are at present in no enviable frame of mind as regards their own chances of getting safely over the affair.

Omaha's board of trade representatives arrived here July 3d and after a reception on 'change were initiated into our inspection methods. Later they were shown about the city and given a view of our river front by an excursion on the river.

Kansas millers are again making things lively. Lately they have been discussing the plan of sending one of their number to South America to make the necessary arrangements for grain and flour shipments. It is to be hoped that it pans out all right.

The State Board of Railroad Commissioners met on July 7th and issued an order summoning the traffic managers of two of the principal lines to answer to the question, why wheat rates should not be reduced on points outside

of St. Louis to St. Louis. As the managers gave no valid reasons a reduction of from 1c to 2c per 100 pounds was made according to territory. This makes the reduction average about \$5 a car. The reductions are to go into effect right away.

Late crop reports place the Southern Missouri and Kansas output at 26 bushels to the acre with an average of 63 pounds to the bushel. Yet at the same time alarming reports come in from the West of the grasshopper pest. Already it has reached Kansas where the harvesting has just been completed and from all accounts the insects will soon reach Missouri. Fortunately they come at a time when the wheat is for the most part out of the field, yet I doubt not but what some damage will result from their incursion.

During the last month St. Louis has received as visitors several prominent and French and British grain and flour men, notably Messrs. Porteus Klein, the former of Liverpool and the latter of London. They all say that they will need our wheat largely this year to help them out in their orders, and it would appear that fall flour consignments to foreign ports will be in excess of the past few years' shipments.

The Traffic Association is actively engaged in forwarding their organization. They have chosen a very able manager to see to the freight interests of their members, and are now looking for suitable quarters for their general offices. It is their intention to see that the Interstate Commerce Law be not violated to their detriment, to work against unjust discrimination, secure better shipping facilities and speedier transportation and other kindred subjects.

WHEAT.

Receipts this week though doubling those of last week, were far below the general estimate and reached only 493,041 bushels, with only 203,814 bushels for the preceding week. Shipments were very small, being only 123,723 bushels this week and 13,582 bushels for the week previous. Stocks are naturally increasing considerably and are quoted 149,587 bushels, an increase of 62,947 bushels over last week. Withdrawals for exports were very large, aggregating 205,847 bushels, while only 44,423 bushels left the city by rail and 38,062 bushels entirely sufficed all city demands. The markets in both No. 2 Red and No. 3 Red were active; in fact in the latter grade buyers could not get enough either for city consumption or for export. No. 2 Red was abundant on the market but was readily taken up by the export trade. Quotations are:

	No. 2 Red.	No. 3 Red.
Monday.....	88 $\frac{1}{2}$	88 $\frac{1}{2}$
Tuesday.....	87 $\frac{3}{4}$	88 $\frac{1}{4}$
Wednesday.....	88 $\frac{1}{4}$	88 $\frac{1}{4}$
Thursday.....	87 $\frac{1}{2}$	88 $\frac{1}{4}$
Friday.....	87 $\frac{1}{2}$	88 $\frac{1}{4}$
Saturday.....	88 $\frac{1}{2}$	88 $\frac{1}{4}$

Receipts footed up 21,105 bushels as against 15,315 last week. Shipments were also larger being 41,784 bushels this week and only 24,494 bushels for the week previous. Only a poor local and Southern demand, with no foreign trading. All low grades were dead on the market, while there was but a suggestion of a demand in high grades. Many of the mills remain idle and it will not be until the new wheat deluges the market and prices that any activity in flour will be felt. Quotations are XXX \$3.00 @ \$3.15; family, \$3.25 @ \$3.35; choice, \$3.60 @ \$3.75; fancy, \$4.10 @ \$4.25;

extra fancy, \$4.60 @ \$4.65; patent, \$4.75 @ \$4.85. New flour, patent, \$4.60 @ \$4.70; extra fancy, \$4.35 @ \$4.40.

BRAN.

High but fluctuating and unsteady, very good Eastern demand but only fairly good Southern and local orders. Prices are from .65 @ .66, sacked; screenings at 70 cents.

WALTER HOWARD BAIN.
ST. LOUIS, July 13, 1891.

OUR LONDON LETTER.

TO crops that had a good seed bed and made a fair start the past month has been of the greatest benefit and the heat which has prevailed during the last three weeks was unable to harm the cereals as they were very strong in root. The outlook of the English wheat fields is most satisfactory and the steady improvement in the weather have combined to cause a retrograde movement in prices. The concessions were made on the first of June and since then each week has marked a steady decline. Few buyers, even now feel disposed to operate beyond their immediate requirements. During the late rise the best Mark Lane price for No. 1 fine California was 48s., and the present price for the same quality off stands is 44s. 6d. per quarter. Australian was 46s., but is now offered at 42s. 6d. making a decline of over three shillings on the past six weeks. Russian wheat commanded 39s. to 46s. at the best period and to-day the same quality can be bought at 37s. to 43s. per quarter. The sudden improvement in the weather and its effects on the wheat plant makes it now possible for the wheat harvest to become general in counties south of the river Thames by August 8th, in the midland shires by the 20th, and in the north by the end of the month. When the first ears of wheat are seen it becomes an easy matter to calculate the probable date of harvest; and the first ears of wheat were shown on Mark Lane Corn Exchange on the 19th of June or some nineteen days later than the average time. In Scotland wheat ears were seen in various districts as early as the 20th of June and were generally reported from the central districts by the 23d.

Receipts this week though doubling those of last week, were far below the general estimate and reached only 493,041 bushels, with only 203,814 bushels for the preceding week. Shipments were very small, being only 123,723 bushels this week and 13,582 bushels for the week previous. Stocks are naturally increasing considerably and are quoted 149,587 bushels, an increase of 62,947 bushels over last week. Withdrawals for exports were very large, aggregating 205,847 bushels, while only 44,423 bushels left the city by rail and 38,062 bushels entirely sufficed all city demands. The markets in both No. 2 Red and No. 3 Red were active; in fact in the latter grade buyers could not get enough either for city consumption or for export. No. 2 Red was abundant on the market but was readily taken up by the export trade. Quotations are:

The unprecedentedly large arrivals of wheat and seeds in Bombay this season and the pressure upon the railway administration has not been relaxed. For example the G. I. P. staff at Wari Bunder still have to deal with an average arrival of about a thousand truck loads a day. These heavy shipments now taking place from Bombay and Calcutta with minor exports from other ports which have commenced fully a fortnight earlier than usual, do not tend to keep the prices in England at a high level and in my opinion the next six months will be a time when values will remain stationary. The values would have fallen still more but for the fact that in France a deficiency of 16,000,000 quarters of wheat will have to be covered from the next season's stocks either by imports or by using old stocks. The crop of last year was officially estimated last autumn at 41,000,000 quarters, but is now known not to have exceeded 39,000,000 quarters. By the end of July about 5,250,000 quarters will have been imported, making a total supply of 44,250,000 quarters. The annual requirements in France are not less than 41,500,000 quarters to which this season has had to be added another 1,500,000 for extra

seeds on account of a large area under wheat having to be replowed.

As promised in my last the following programme will give the readers of the UNITED STATES MILLER an idea of the amount of work and pleasure that will be gone through at the forthcoming Northampton Convention which will be held next week. It will be noticed that pleasure predominates and only two papers will be read. This is much to be regretted as at these conventions the principal object of meeting should be to have five or six good papers read and discussed, matters which affect the trade and require to be put into shape and brought before Parliament, etc.

OFFICIAL PROGRAMME.

TUESDAY, 7th JULY.

11 a. m.—Reception of the Convention by the Mayor and Corporation of Northampton at Guildhall.

11.30 a. m.—Annual Business Meeting, Report of the Council, Election of President, Officers, &c.

11.30 a. m.—Reception of the Lady Visitors by the "Committee of Ladies."

1 p. m.—Luncheon in Masonic Hall *a la carte*.

3 p. m.—Business Meeting, when papers will be read by Mr. J. W. Loveband, Mayor of Salisbury, on "The Tintenometer," and Mr. C. E. Gittens on "Softening of Water for Steam Boilers."

6.30 for 7 p. m.—Annual Dinner (Ladies' and Gentlemen's Tickets, exclusive of wine, 10s. 6d.) at Masonic Hall, when the chair will be taken by the President.

WEDNESDAY, 8th JULY.

10.30 a. m.—Business Meeting, when papers read will be discussed.

1 p. m.—Luncheon in the Masonic Hall *a la carte*.

1.45 p. m.—Visit Mills, Shoe Factories, Breweries, &c.

4 p. m.—By special invitation of the President and the Local Association the visitors will be conveyed in carriages to Althorpe Park, the seat of Earl Spencer, K. G., where a Garden Party will be given. It is hoped his Lordship will be able to receive and conduct the visitors through the library, grounds, &c., &c.

8 p. m.—Party returns to the Masonic Hall, when at

9 p. m. a Smoking Concert will take place in the Banquet Hall, when it is hoped that visitors will give their assistance.

THURSDAY, 9th JULY.

9 a. m.—Special Train will leave Castle Station for Leamington at reduced rates. The party will then drive to Stratford-on-Avon and visit at

10.15 a. m.—The Beautiful Parish Church, the Theatre and Monument, Shakespeare's Birthplace, and the Fountain given by Mr. G. W. Childs, of Philadelphia, in 1887.

11.30 a. m.—Leave Stratford in Carriages for Warwick.

12.45 p. m.—Luncheon at Woolpack Hotel at Warwick. Visit Castle, and leave Warwick at

3.15 p. m. for Kenilworth Castle, where a photograph of the party will be taken.

5 p. m.—Leave Kenilworth for Leamington, passing Stoneleigh Abbey *en route*.

6 p. m.—Arrive at Leamington.

6.15 p. m.—Special train to Northampton.

Tickets for the whole excursion, including luncheon (exclusive of Wine) at Warwick, and admission to the various sights, etc., etc., 18s. each.

FRIDAY, 10th JULY.

10 a. m.—Meet at the Masonic Hall. Visit Flour Mills, Queen Eleanor's Cross, Churches, Chapels, etc., etc.; or Drive to Blisworth.

11 a. m.—Organ Recital at All Saints' Church.

1 p. m.—Luncheon at Masonic Hall, *a la carte*.

2 p. m.—Carriage Drive to Castle Ashby to view the Grounds (by kind permission of the Marquis of Northampton), and other places of interest.

Tickets for the Drive, including Tea at Falcon Hotel, 5s.

8:30 p. m.—Return to Masonic Hall, where an impromptu dance will take place. To suit the convenience of the members of the Association and their friends morning dress will be admitted both for ladies and gentlemen.

So much for the forthcoming convention of the National Association of British and Irish Millers which is becoming year by year more like an excursion. The mills that are being built at Cardiff for Messrs. James Tucker Limited are making steady progress towards completion. The contract for machinery was placed last week with Messrs. Whitmore and Binyon of Mark Lane London, El and Wickham Market.

These mills when finished will form one of the most complete plants in the country and they will have a capacity of 50 sacks of flour (280 lbs.) per hour. Most of the dressing will be done on patented round reels and the purification will be effected by Victoria purifiers. The wheat cleaning department will be of a most complete character and the machinery, which will be capable of treating all kinds of wheat, will be principally of the well-known "Eureka" pattern, separate sets being arranged for hard and soft wheats. The mills are so situated that vessels drawing 30 feet of water will be able to come alongside and the machinery in the warehouse for discharging the grain from the vessels and storage of same will have a capacity equal to discharging three such vessels. By the way, the eldest son of Mr. Whitmore of the firm of Whitmore & Binyon, the milling engineers who are much envied by their other competitors for securing the large order, was for some time in the works of Messrs. E. P. Allis & Co. of your city and is now assisting his father at the Iron works, Wickham Market. Some idea of the competition amongst milling engineers will be gathered by the annual report for the year 1890 dealing with the inspection of Liverpool factories. The accidents in this district amount to a total of 275 against 305 in 1889, 53 proving fatal. Most of these occurred in chemical works, slate quarries and iron and steel works of various kinds and the inspector of factories in the report complains greatly as to the apathy shown by engineers with regards to safety in continuing to leave long projecting set-screws on the loose collars of shafting. A well-known firm of milling engineers is mentioned in this report as having recently erected a flour mill in the district which was visited by the inspector who found that every loose collar throughout the building had been fitted with screws not only not countersunk but with half an inch of screw as well as head projecting.

The strike of Grain Porters in Dublin still continues without a near approach to a settlement although the Shipping Federation are sanguine of winning as they state they can get an unlimited number of men. A cargo of malt was discharged on Saturday last into bins especially erected in the Custom House Dock Stores and the corn which the Great Southern Railway men refused to take from Messrs. Richard Perrin & Son's men was accepted on Monday night last. Railway directors are determined to prevent their men from refusing to take delivery of any description of goods, no matter from what merchant consigned. The men, it seems, are determined to hold out, and say they will win, as they expect support from other labor societies, notwithstanding

that Mr. Hunter has imported into Dublin some hundreds of workmen, and it is understood that he will bring 200 more from the North of Ireland and Scotland.

I have just learned that the National Association of French Millers estimates the wheat crop of France at 82 to 83 million hectolitres or 28 $\frac{1}{2}$ to 28 $\frac{1}{2}$ million quarters which would make the deficiency between 13 and 14 million quarters as last year's crops were officially estimated at 41 million quarters.

LONDON, July 2. X. Y.

MILWAUKEE NOTES.

THE Board of Directors of the Chamber of Commerce has prepared amendments to the rules governing the inspection of wheat, the adoption of which it recommends as a whole. The amendments announced at the session July 24 and voted on by the Chamber, July 1, who adopted the recommendations of the board.

The recommendation of the board is as follows:

Resolved, That rule XIX be and is hereby amended by the inserting of the following paragraph in section 1, under the heading of "Winter Wheat."

No. 2 hard winter wheat, to be sound, reasonably clean and composed of not less than 90 per cent. of the varieties of wheat known as Turkish "winter," and that section 7 of rule XI be and is hereby amended to read as follows:

All contracts for the purchase or sale of wheat, unless otherwise specified, shall be understood to be for No. 2 wheat, comprising No. 2 red winter and No. 2 hard winter wheat, and these grades, or the higher grades of these varieties, either in whole or in part, shall be received in fulfillment of such contracts.

A CUT of 5c per 100 lbs. in eastward land-and-rail rates has been inaugurated and one company's line at least takes flour and millstuffs to Boston at 20c per 100 lbs. The other lines probably will follow suit.

THE failure of one of the largest grain commission houses in Milwaukee, Mohr, Zinkeisen & Co., caused something of a sensation in financial and commercial circles; and legal proceedings were commenced by the firm's bankers.

J. A. BYDEN & Co.'s warehouse and elevator had a narrow escape recently from total destruction by fire. It was, however, saved with a loss of only about \$1,500.

THE EDWARD P. ALLIS Co. recently filled an order for a 200 h. p. Reynolds-Corliss engine in the shortest time on record. At 10 o'clock a. m. a telegram arrived from an electric light company in an Iowa city, stating that their old high speed engine had met with an accident sufficient to render it beyond repair, and a new engine must be obtained in the shortest possible time. Stock parts of the proper sized engine were put together by a force of selected skilled workmen, and by 4 o'clock p.m. of the same day a special train, consisting of a locomotive and flat car, drew out of the Allis yards en route for the Iowa city, bearing a completed engine. So the electric company lost the revenue of one night's service only.

JULY CROP REPORT.

THE July report of the Department of Agriculture makes the acreage as compared with bread harvested last year of corn, 108.3; potatoes, 102.3; tobacco 102. Condition—Corn, 92.6; winter wheat 96.2; spring wheat, 94.1; rye, 93.9; oats,

87.6; barley, 90.9; potatoes, 95.3; tobacco, co., 91.1. The heavy increase in corn acreage is more apparent than real. The comparison is with the bread harvested last year when there was a loss of 6,000,000 acres by abandonment on account of drouth. The present return makes the acreage slightly less than 78,000,000 acres or somewhat smaller than the area actually planted. Kansas and Nebraska naturally show a large increase, but their area apparently does not exceed that harvested in 1889. A further and more minute investigation will be made in the districts which suffered most from drouth last year.

The crop is late in all sections on account of drouth and unfavorable conditions at the time of planting and cool weather during May, but June was warm with abundant moisture, and the crop was coming forward rapidly on July 1. In the Ohio and Upper Mississippi valleys the progress during the month was especially gratifying, but in Kansas and Nebraska considerable damage resulted from excessive rainfall. In many districts the June rains prevented proper working, leaving fields foul, but a few days of sunshine would remedy this. The general average is a fraction below that of 1888 and of 1890 and slightly above that of 1889. The averages of surplus states are: Ohio, 93; Indiana, 95; Illinois, 96; Iowa, 94; Missouri, 88; Kansas, 82; Nebraska, 90.

The condition of winter wheat is returned practically the same as in June. The crop is harvested, except in its more northern habitat, with a condition the highest reported since 1879 with one exception.

So far as can be judged at time of harvest the berry is reported generally plump and in keeping with the heavy straw, but occasionally mention is made of short heads. Averages of principal states are: Pennsylvania, 98; Ohio, 97; Michigan 89; Indiana, 99; Illinois, 98; Missouri, 98; Kansas, 94; California, 98.

The condition of spring wheat improved during June, the advance being in Minnesota and the Dakotas, where the month was exceptionally favorable. Chinch bugs have appeared in portions of the Northwest but with no appreciable damage yet. State averages are: Wisconsin 77; Minnesota, 93; Iowa, 96; Nebraska, 96; North Dakota, 98; South Dakota, 97; Washington, 98.

Oats have improved during the month, but the general average is the lowest reported since 1879 except in 1887 and last year, when a July condition of 81.6 was followed by a practical failure of the crop. The poor condition is generally the result of drouth early in the season, the present improvement having followed the seasonable rains and high temperature of June.

The first return of potatoes shows condition higher than the average of recent years, while that of tobacco is higher than in any year since 1886. The fruit prospect is very flattering in New England and the North Atlantic states and West of the Missouri river to the Pacific coast. The crop in Ohio and Michigan was materially damaged by the frosts of May. A special cable from the European agent indicates a heavy deficiency in the European rye crop.

ALL persons desiring to reach the entire milling and grain trade of America, by circular or otherwise, should obtain a copy of CAWKER'S AMERICAN FLOUR MILL AND GRAIN ELEVATOR DIRECTORY FOR 1890-91.

THE GLUTEN IN WHEAT.

THE relative proportion between the gluten and starch differs in different countries, and also on different soils; but the gluten being by far the more valuable of the two, any slight increase in its percentage would greatly improve the wheat. Our wheats have the reputation of possessing gluten in large proportions, and in many parts of the world they are sought eagerly for seed. But a great deal of this has been due to the fact that the wheat has been grown on the virgin soil of the Northwest, where the rich nitrogenous matter has been collected for centuries. Wheat grown upon the virgin soil of this country is so much superior to that of many other countries that 100 pounds of it will go further to sustain the strength of workingmen than 150 pounds of wheat from Australia and other countries.

The object in cultivating wheat then is to increase the quantity of gluten, and the application of manure for this purpose has not yet been definitely settled. The fertilizer that will produce the heaviest crop of wheat does not always produce the greatest amount of gluten. Virgin soil, however, is the soil, when cultivated, that contains the essentials for producing a high percentage of this constituent, and anything that will tend to keep the soil up to this standard is good.

A great deal also depends on the wheat. That the West is specially adapted by the character of the soil for wheat growing may be shown by a curious result of sowing foreign seeds there. The round varieties of wheat contain a less amount of gluten than the elongated, but when these same round seeds are sown in the soils of the West they gradually become elongated, increasing the amount of gluten as they change in shape. Flour made from wheat rich in gluten is never the whitest, but has rather a creamy tint. So far as can be judged at time of harvest the berry is reported generally plump and in keeping with the heavy straw, but occasionally mention is made of short heads. Averages of principal states are: Pennsylvania, 98; Ohio, 97; Michigan 89; Indiana, 99; Illinois, 98; Missouri, 98; Kansas, 94; California, 98.

The condition of spring wheat improved during June, the advance being in Minnesota and the Dakotas, where the month was exceptionally favorable. Chinch bugs have appeared in portions of the Northwest but with no appreciable damage yet. State averages are: Wisconsin 77; Minnesota, 93; Iowa, 96; Nebraska, 96; North Dakota, 98; South Dakota, 97; Washington, 98.

Oats have improved during the month, but the general average is the lowest reported since 1879 except in 1887 and last year, when a July condition of 81.6 was followed by a practical failure of the crop. The poor condition is generally the result of drouth early in the season, the present improvement having followed the seasonable rains and high temperature of June.

The first return of potatoes shows condition higher than the average of recent years, while that of tobacco is higher than in any year since 1886. The fruit prospect is very flattering in New England and the North Atlantic states and West of the Missouri river to the Pacific coast. The crop in Ohio and Michigan was materially damaged by the frosts of May. A special cable from the European agent indicates a heavy deficiency in the European rye crop.

ALL persons desiring to reach the entire milling and grain trade of America, by circular or otherwise, should obtain a copy of CAWKER'S AMERICAN FLOUR MILL AND GRAIN ELEVATOR DIRECTORY FOR 1890-91.

NEWS.—The Coon Island Flouring Mill, of Washington, Pa., has been leased by J. D. Frazier, who has put in the roller process.

NEAR Charleston, Mo., July 5, John S. Cordrey lost 2,200 bu. of wheat by fire. Insured for \$1,500.

AT Hollister, Cal., July 6, the flouring mill furniture factory, and a store were burned. Loss \$4,000; insurance \$500.

AT Decoto, Cal., July 4, Salz's grain warehouse, also store and saloon were burned. Loss \$20,000; insurance \$10,000.

THE Manheim Roller Flour Mills, at Manheim, Pa., which have been undergoing repairs, resumed operation July 9.

AT Alvarado, Cal., July 4, the Alvarado Roller Mill and Grain Elevator were burned. Total loss, \$35,000; insurance \$25,000.

DANIEL F. DIETRICH & SONS will begin the manufacturing of flour at Reading, Pa., shortly, under the firm name of the Penn Milling Company.

THE new grist mill of Richmond and Rafter at Clifton Springs, N. Y., was damaged by fire to the amount of \$300, July 2. Fully covered by insurance.

AT New Rockford, N. D., July 6, J. W. Richter's elevator was struck by lightning and burned with 30,000 bu. of wheat. Loss \$50,000; no insurance.

A LARGE elevator and corn mill is being erected at Bangor, Me., by J. C. Towle & Co., who expect to have it ready for operation by the first of September.

AT Warren, Minn., July 6, the Inter-State Grain Company's elevator and warehouse, with 10,000 bushels of wheat, was burned. Loss, \$25,000; fully insured.

THE elevator at Brownton, Minn., owned by Childs & Hinrichs was burned with several thousand bushels of wheat on June 16. The building and grain were insured.

THE liabilities of Chas. Haight & Co., flour commission merchants at No. 24 State street, New York, are reported to be about \$300,000, and nominal assets considerably larger.

ON May 25 Mr. J. C. Hotham who recently rented the Ebensburg (Pa.) Steam Flouring Mill took charge of same. As soon as some needed improvements and repairs are made the mill will be put in full operation.

A SYNDICATE organized at London and having Paris interests allied with it, has sent a representative to the United States with authority to invest \$28,000,000 in grain. One of the heads of the Rothschilds in Paris is interested.

THE London barley market is higher owing to reports of a serious drouth in south Russia. The weather in that country has become excessively hot—"tropical" Beerbohm calls it—and all crops are being seriously damaged.

AT Davison, Mich., July 9, the flouring mill of D. P. Bothrick was burned. The mill was three stories high, and, with the machinery, was valued at \$7,000. It was a total loss. Insured for about \$5,000. There was little flour and grain in the mill.

MCCULLOUGH & SUFFELL have leased the flour mill at Connor's Point, West Superior, Wis. The mill has been shut down for some time and the new lessees are placing it in good repair preparatory to starting up as soon as possible. The mill has a capacity of 200 barrels per day.

THE little village of Clitheral, Minn., four miles east of Battle Lake, Minn., suffered a severe loss by fire June 17. The grist mill, Northern Pacific elevator and two box cars were burned. The fire originated in the mill, which was being operated day and night. Loss, \$25,000; insurance not known.

A LANSING, Mich., report says grain lice are almost so numerous as they were two years ago, when considerable damage was done. Bloomington, Ill., says the arm worm is playing sad havoc with wheat in that section. In Iowa, Minnesota and South Dakota terrific storms have damaged the crops.

W. A. DAVIS, a millstone manufacturer of the town of Rochester, Ulster County, N. Y., has been placed in jail at Kingston to await the action of the grand jury. He is charged with having forged the names of many of the principal business men in the neighborhood of his home to notes aggregating upwards of \$300,000.

AT Toledo, O., May 27, ground was broken for a large wheat elevator which is being built in connection with the Toledo Flouring Mill. The elevator will be 50x100 feet and 70 feet high, and will have a capacity of 200,000 bushels. The mill which is just approaching completion will have a capacity of 4,500 to 5,000 barrels per day.

THE contract for the erection of the Humbaugh, Mariott & Co. elevator at Rapid City, Minn., to be completed by Aug. 10, has been

let. Work will commence at once. Rapid City elevator capacity was increased 70,000 bushels and its milling capacity 150 barrels a day last year but there is still a demand for more mills and more elevators.

A SYNDICATE has been formed at Gaithersburg, Md., to be known as Gaithersburg Milling and Manufacturing Co., for the purpose of operating a large milling plant of 150 barrels daily capacity. The same motive power is to be used to operate machinery for cutting and bailing hay and manufacturing fertilizer. The capital is \$50,000.

THE large roller process flouring mill at Waynesborough, Va., which for several months has been idle, will shortly be put in operation. Andrew Boling, of the Augusta Roller Mills, near Staunton, and M. Kiolighan, a grain dealer of Staunton, have obtained possession of the mill and will soon have it running to its full capacity of 130 barrels per day.

THE Stoneboro Steam Flouring Mill, at Franklin, Pa., owned by George W. Porter and A. E. McClelland, was burned to the ground June 18. The mill was a large frame structure erected about five years ago, and was furnished with first class modern machinery. The origin of the fire is unknown, but it is supposed to be the work of an incendiary. Insurance \$5,000.

THE Marion Milling company, of Marion, O., recently incorporated, has succeeded to the Gregory & Sears mills with a \$30,000 capital and officers as follows: T. P. Wallace, president; J. Strelitz, vice president; J. B. Fisher, secretary; William Wuntsuiger, treasurer; M. E. Burke, manager; directors, E. Huber, T. P. Wallace, J. Strelitz, T. Fahey, J. B. Fisher, M. E. Burke, E. Conley.

LUKE MARVIN, assistant manager of the Lage Superior Elevator Company, Duluth, states that the 279,095 bushels of wheat which the experts could not account for in their report in St. Paul, is the exact amount of bin burned wheat disposed of under the direction of the railroad and warehouse commission and of which the experts would, of course, get no account. The experts apparently found no other wheat missing or shipped out without inspection or weighing.

CONTRACT has been signed by the Cochrane Roller Mills, of Escanaba, Mich., to immediately remove their plant to Basic City. Instead of the Cochrane Roller Mill Co., the concern will be known hereafter as the Basic City Iron Works. The Company will make a specialty of manufacturing flour mills. They will also manufacture other machinery, such as chilled plates for ore crushers, car axles, turn-tables, chilled shoes and dies for stamp mills, couplings, shafting, boiler fronts, fire arches, fire doors, fly wheels, etc.—Va. Manufacturer.

AT West Superior, June 23, a meeting of the Freeman Mill Company stockholders was held at which the following directors were elected: W. H. Slack, H. T. Fowler, Peter Deyo, C. E. Billquist, John L. Lewis, A. A. Freeman, E. A. LeClair. The stockholders present represented \$166,000 of stock subscribed. Director Billquist is of the old New York flour firm of Grinnell, Minturn & Co. that will occupy the same position to the new mill company as the defunct Chas. Haight & Co. did originally.

THE Mazomanie Milling Company and Bronson, Draper & Co., bankers, both of Mazomanie, Wis., suspended on June 25. The milling firm is composed of Bronson, Wend & Watterson. Watterson is a wealthy business man of San Francisco. The assignment is caused by the heavy drop in flour, the milling firm having forty car-loads in New York. The bank is a private concern and is directly interested in the milling company. The liabilities are estimated at \$20,000. The assets will more than meet them.

THERE has been inaugurated in Brussels an international bureau for the publication of the customs' tariff of all countries. The bureau is supported by English, French, German, Belgian and other governments, and it is expected that it will render great service to the commercial world. The foreign Department of Belgium has been entrusted with the organization of the institution. Probably the most important feature of the bureau will be the publication once, or several times, monthly of an international customs' bulletin, printed in the English, German, French, Spanish and Italian languages, and containing the customs' tariffs of the world, and other information.

AT Buffalo, N. Y., June 16, the flour mill of Urban & Co., on Ellicott street, near Genesee street, was damaged by fire. The flames were confined to the top story. Loss, \$40,000, of which about \$4,000 is on the building. The mill contained 300 to 400 barrels of flour and 3,000 bushels of wheat, all of which was ruined by water. The heaviest loss is on the machinery. The cleaning machinery was on the fifth floor. This and the large

amount of belting were ruined by fire. The remainder of the machinery was ruined by water. Mr. Urban states that the insurance is \$11,500. Fire also did \$5,000 damage to building and machinery at the works of the Barber Asphalt Company on Fourth street, near the canal.

AT Lancaster, Ky., June 29, the granary belonging to W. H. Kinnaird and operated by H. B. Marksburg, was burned. Loss \$12,700, located as follows: Building, \$4,600; insurance \$3,000; 14,000 pounds of wool, \$3,500, property of Cogar & Haas, Danville, fully insured; 3,000 bu. of wheat owned by Duddason Bros., Gilbert's Creek, policy of \$4,000; 6,000 sacks belonging to H. A. B. Marksburg, the manager, \$6,000; no insurance. The companies in which policies were held were Liverpool & London & Globe, North British and Mercantile, Queen, Royal, Springfield Sun, Mutual and Aetna. Two gondola cars, property of B. & O. Railroad, were also burned, with a loss of \$1,000. The fire is the work of an incendiary.

THE following Milling Companies were incorporated during the past month. The Ravanna Milling Company of Ravanna, of Garfield County, Kans., capital \$5,000. Directors—G. U. D. Guff, Geo. W. Miller, J. R. Bricker, Fred. C. Thomas and John Newhall. Fairplay Milling Company, of Fairplay, Mo., capital \$10,000. Incorporators—H. D. Train, Jas. B. Eisley, John W. Raynor, S. D. Strain, S. G. McAchron. The Progress Alliance Milling and Graining Company, of Pottsville, Tex.; capital \$5,000. Directors—Wm. Bynum, S. A. Perdue, Thomas Marion, Wm. Reeves and John Beaty. Majorsville Milling and Mining Company to operate saw and grist mills, at Majorsville, Marshall county, Pa. Capital \$7,000 with the privilege of increasing it to \$20,000. S. T. Alley and thirteen others are the incorporators.

AT a meeting of the chamber of commerce of West Superior, Wis., July 6, T. G. Alvord, after stating the object of the meeting to receive a report from the committee appointed to revise the operative methods of the Superior commercial union, said: "I regret to inform the chamber that the meeting is being polluted with an element which must be expurgated." This referred to J. Adam Bede. Bede denied having lied about Superior. F. A. Mannen moved that he be ejected and given his choice of going quietly or being thrown down stairs. The motion was adopted and Bede was ejected.

The flour movement through the port of Superior, Wis., is holding out unusually heavy for this, the dull season, with the Minneapolis mills. The presence of the larger class of lake vessels at Tower bay slip lock daily is an interesting feature of the changes in this port. The Northern Steamship and the Eber Ward line are each going to this point whenever they have consignments of importance for local delivery.

CLIPPINGS FROM THE MILLER, (LONDON.)

ELEVATORS IN INDIA.—The report of the Bombay Chamber of Commerce for the year 1890 contains an interesting correspondence on the subject of grain elevators, and although the letters themselves date back as far as the latter end of 1889 and the commencement of 1890, yet this question of grain handling and storage can never be out of season in connection with our great Eastern dependency. In September of 1889 a proposal was laid before the Government of India by Mr. James G. Smith, of Messrs. Richie, Stuart & Co., Bombay, for founding an Indian elevator company, which should work in India on the lines of the great elevator companies of the United States. That is to say, this company was to undertake to clean, grade and store wheat, to deliver "grain receipts," which should be transferable, like their prototypes in America; and also to issue "certificates," which it was suggested, should be countersigned by an official appointed by the Government. The promoters of the scheme held that a fair start might be made with a capital so small as £25,000, but asked of the Government a guarantee of 4 per cent. for the first five years' work, such advances to be repayable, without interest, from one-half of such surplus profits as should exceed 6 per cent. The Government was also asked for grants of free land for the company's purposes, and for a

sort of monopoly of the business for a term of five-and-twenty years. Some of these claims certainly seem large, but the scheme was carefully considered by the Indian Government, and, as usual, the opinions of experts were taken.

Colonel Filgate, R. E., was strongly in favor of the enterprise, while that authority on Indian and other wheats, Mr. John McDougall, though advocating the establishment of grain elevators as a necessity for India, pronounced against the grant of any sort of monopoly to private firms, counseling the Government to take the scheme into its own hands. A decidedly adverse view was received from Mr. John Marshall, the secretary of the Bombay Chamber of Commerce. Mr. Marshall, speaking on behalf of the committee and of other members of the Chamber, many of whom were reported to be up-country buyers and exporters, declared elevators to be unsuited to the requirements of the country, and to be financially impracticable. He pointed out with some force the difference in the conditions of Indian and American agriculture. In the United States large tracts are sown with the same kind of wheat, and thus grading is a comparatively easy task. There are many railways, so that every means is at hand for quickly and cheaply taking cereal crops to central points, while the climate renders the storing of produce in warehouses a necessity. All these conditions are, it is urged, absent or reversed in India. The wheats grown, are of too varied a character to be graded without much greater labor than is entailed in America. With the still undeveloped railway system, facilities for conveying grain to central points are few; while, on the other hand, the cheapness of labor is calculated to take a large discount off the economy effected by handling grain on a large scale and by machinery. The heaviest objections brought forward by Mr. Marshall are based on the climate. He says that "for seven or eight months of the year grain can be safely kept in the open air without expense for either rent, fire insurance or other charges incidental to warehousing; while during the other four or five months the native system of storing in pits is not only inexpensive, but gives immunity from weevils which no mode of warehousing ensures. The loss in weight from this cause alone during the monsoon would probably be not less than 5 per cent., not to speak of the still more serious damage to quality which results; and for this reason alone, if no other objection existed, the members of the Chamber consider that elevators would prove unsuitable and impracticable." The Chamber appears to have formulated its judgment on results given by certain elevators of the old school, in which no aeration was secured. Air is a deadly enemy to weevils and similar insect plagues, and it seems probable that in unreservedly condemning all elevators, without reference to system, the Bombay Chamber of Commerce may have spoken too hastily.

Good goods and fair treatment will win every time. On this principle the Union Iron Works, of Decatur, Ill., are meeting with deserved success. In a recent letter to us they state that they are very busy, having all the work that they can handle at present and excellent prospects for the future. Last spring they added considerably to their capacity, but the steadily growing trade is again crowding the limits.

THE MILLERS' TRACING BUREAU.

MR. FRANK BARRY, the efficient secretary of the Millers National Association, has recently issued the following communication in regard to the Millers' Tracing Bureau, which is well worth careful consideration by millers. The circular reads as follows:

"At the recent annual convention of the Millers' National Association the subject of the so-called 'Millers' League' or 'Tracing Bureau' was taken up for discussion, resulting in the adoption of a resolution: 'That the formulation of a Millers' Tracing Bureau be referred to the executive committee, with power to put the same in operation as early as practicable, it being understood that the expense of conducting said bureau shall be borne by its patrons. In compliance with this resolution the executive committee has prepared a plan, which is submitted herewith. As a preface your attention is called to the fact that, so far as all former plans for the organization of a tracing bureau (proposed by the executive committee of this association Dec. 20, 1890, and submitted first by Mr. A. M. Bailey, and subsequently through a circular issued by the association Jan. 25, 1891,) are concerned, the same are dropped, and the plan as herein outlined substituted, and will be put into immediate operation. It is hoped that the subscriptions heretofore made by members of the association to the guarantee fund will now be renewed and considered binding."

"It is proposed to form an organization to be known and styled as 'The Millers' Tracing Bureau,' which shall be managed by the executive committee of the Millers' National Association, the function of which shall be to trace and hurry to destination shipments of flour made by members who may join this sub-organization.

"Any member of the Millers' National Association may become a member of the Millers' Tracing Bureau by signing an application in which agreement is made to subscribe to the guarantee fund, for the support of said bureau, a sum not less than \$10 per unit, of 100 barrels, of the daily capacity of the mill or mills owned, controlled or operated by the applicant; such guarantee to be payable in such amounts, and at such times as the executive committee may direct. Provided, that such application shall be approved by the executive committee.

"The expense of operation of the bureau shall be borne by its members. A fee per sack or barrel, will be charged for the service furnished, and monthly statements of accounts rendered, to be followed by sight draft. It is believed that the patronage secured will make it self-supporting from the start, and that it will be necessary to call for but a small proportion of the guarantee fund, to be used for purchasing stationery and supplies, which amount may be returned to subscribers at a later date.

"The bureau will be conducted under the direction of the executive committee until the next annual convention of the Millers' National Association is held, at which time a convention of the members will be called, and if desired, the organization may be perfected by adoption of a constitution and by-laws, and election of officers to manage the affairs of the sub-organization.

"For the present the service of the bureau will be confined to tracing export flour shipments; the charge to be made for such service to be one-sixth of one cent for 140-pound sacks, and one fourth of one cent per 280-pound sack or per barrel, on all shipments reported for tracing.

"Upon acceptance of an application for membership, the member will be supplied with suitable blanks to be filled out complete, giving all information required thereby, which should be promptly forwarded to the secretary of the Millers' National Association, the information thus given to be held and treated as strictly confidential. At the start a representative will be placed at

New York City, who will have assistants at Boston, Baltimore, Philadelphia, and all important seaports of the United States. Upon receipt of advice of a shipment to be traced, the secretary will at once report the shipment to the representative at the seaboard, who will be on the lookout for it, and, upon arrival, see that prompt transfer is made to the steamship, and report any and all delays that may occur.

"Should there be a delay at the seaboard which our representative there may be unable to promptly overcome, an effort will be put forth from headquarters to correct the matter, and all members of the organization will be promptly advised of such troubles in order that they may avoid shipping via routes which do not furnish proper and prompt service. As the requirements and patronage of the bureau warrant, its field of operation will be enlarged, and agents will be placed at other important freight transfer points, such as Buffalo, Toledo, Chicago, St. Louis, etc. After successful operation in tracing export business, the bureau may extend its action to the field of domestic shipments.

"An arrangement has been made with an efficient and experienced man to represent the bureau at the seaboard, and as soon as the proper blank forms can be prepared it will commence operation. Under this plan we can start with a smaller guarantee fund than we have heretofore thought necessary. Every member of the Millers' National Association who is exporting flour is invited and urged to join in this important movement.

"We predict that the result of this movement will be of inestimable benefit to members, and trust that sufficient enterprise may be shown by the members of the National Association to insure its ultimate success.

EMERGENCY REMEDIES.

Necessity Teaches Men to be Their Own Surgeons.

EVERY man to his trade. A man is either a fool or a physician at forty. Here are two ancient adages which suggest a combination. Every trade has its special physic. This is true. In conversation a few days ago with a *Recorder* reporter, a New York surgeon remarked that few things gave more pain, attended with so much danger, as some particles of lime dust in the eye. A gentleman standing by quietly remarked: "And yet such an accident is of daily occurrence, is attended with hardly any danger, and is most easily treated." "How so?" came a chorus of voices.

"Well, I will tell you. I was brought up to the trade of a plasterer, a ceiling plasterer. You may not know that the final layer upon a good ceiling is almost pure lime. The plasterer stands upon a platform and lays on the paste. It falls upon him in every direction, and especially if he is a new hand, often a splatter falls right into his eye. When he gets accustomed to the work, the eyelid seems to get used to it, too, and seems to close automatically in self-defence. Directly such an accident occurs a fellow-workman takes a mouthful of water from the nearest pail—and there is always a pail of water handy—opens the eye as wide as possible, and squirts with all his force the contents of his mouth against the eyeball. This immediately cools the lime and also drives it out of the eye. Simple remedy, isn't it, and eminently practical. But you see a man's eye would be burned out long before he could reach the nearest doctor's."

Immediately other gentlemen had something to tell. One was a wine merchant. "My cellarmen have a funny way of stopping bleeding. They think nothing of a cut finger or hand, or even of a large wound. They

run to the nearest spirit cask, or claret, if spirits are not handy, and let a few drops fall on the wound. It acts as an immediate styptic. Then a big dusty old cobweb is taken from the nearest bottle or corner of a bin and clapped on tight over the cut or abrasion. Cobwebs are splendid healing agents."

"Sailors," said another, "are never at a loss, under such circumstances; their favorite styptic at sea is a bit of unravelled tarred rope. On land they will take the quid of tobacco from their cheek, or the lining of their cap, and its effect is astonishing. But I have seen a man wild drunk after such a quid has been tied over a wound. I suppose the nicotine gets into the blood and acts as an intoxicant."

"Carpenters," said another gentleman, "if they cut themselves pick up a handful of fine shavings and clap them on to the wound, and joiners swear by a daub of glue, but one of the quaintest things I ever saw used was by an old farmer up in Chester County. He got his hand badly torn by a bit of old wire fence, and it bled considerably. Without a thought he stooped down and dug up a handful of soil, spat on it and worked it quickly into a paste, and laid it on the wound, and bound it up with his neckhandkerchief. In an astonishingly short time he was at work again as if nothing had happened."

"Can any one tell me the therapeutic value of fasting spittle?" asked a quiet man. "I know that old wives, as the saying is, take great stock in it for warts, birthmarks, corns, bruises and even small cuts. Indeed, old nurses seem to believe that their saliva in the morning before taking food is a panacea for every kind of skin complaint. But did you ever hear of the nap of an old beaver or silk hat being used as a styptic? You will find it a capital one, and for burns and scalds, if placed over the wound in sufficient quantity to keep out the air, it will draw out the heat rapidly, as any hat manufacturer will vouch."

"We are getting a little off the track," said one, "when we talk of fasting spittle; deep sea fishermen and fishmongers generally hold that nothing is better than a piece of fish skin. Eel skins are commonly used to cure rheumatism, and are considered infallible by some. A negro minstrel once told me that nothing stopped bleeding and assisted nature's healing work so well as burned cork. Thus every trade and profession has its own emergency remedies, as the doctor called them just now, and doubtless the list might be extended to every trade known."

SMOKE CONSUMER INVENTED.

A curious invention has been made by an engineer in Russia named A. Clausen. It is a smoke burner which is claimed to consume every particle of coal, even the worst soft coal, and it is based on a principle which is the direct opposition of the one that has been held for years to be the only one by which a complete smoke consumer could be constructed. It has been held that the cause why so much carbon escaped in the ordinary furnace in the form of smoke, causing at once an enormous waste of material and a pollution of the atmosphere, was that an insufficient supply of air was admitted, so that there was not enough oxygen to burn all the carbon. Smoke burners have been constructed with a view of admitting as much air as possible and passing it through the fuel, where it would come in contact with the coal

In this way smoke consumers have been constructed that did their work tolerably well.

Mr. Clausen, however, started to solve the problem by first analyzing the matter that escaped through the smokestack, and claims to have found that a large part of it consisted of free oxygen. He concluded that the fault lay not with a lack of air, but, on the contrary, with too large a supply of it. He reduced the amount of air admitted to the furnace until he came to a point where he admitted air only through two little holes of the diameter of an ordinary lead pencil. When he attained this, he claims the combustion of the coal was complete. Reports come from Paris and London indicating that experiments on a small scale have been made with the new invention and have proved remarkably successful.

DANGEROUS INFORMATION.

How to speculate without brains is what every one that speculates should know. It is easy for one to know too much to be a speculator. There are certain data of an official character that are true and more that are untrue, or perhaps are estimates of uncertain value. To know all these that bear upon the values of a speculative commodity and not to know the relative bearing of each would be worse than to know nothing of them. It has been often noticed that the statistician, so called, "gets left" in speculating. It proves that it is dangerous to have just that kind of information in just that quantity that generally involves the one that is guided by it. If he knows nothing of these things and is guided by instinct or impression he is oftener right. In the present crop year the statistical position of the cereals, as to quantity and requirements, was officially promulgated from Washington from the agricultural department. We were limited by them in quantity for the year. The quantity is used but the year is not. Whoever knew all those official announcements and attached to them his faith and money needs sympathy. He and his money are parted, but he has the estimates. They may make him wiser but he is not so rich. Brains enough to know that official data have only approximate values have speculative uses, but the less, they rely upon official reports the better.—*Market Record*, Minneapolis.

THE SLIPPING OF BELTS.

A multitude of opinions have been put on record as to the best means of preventing belts from slipping. A writer in an exchange, referring to this question, says: Let me answer once for all—a little good common sense. If a man is drawing a hundred bushels of wheat to your mill and the wagon gets stuck, he must either take off part of the load or hitch on more horses. It is exactly the same with a slipping belt. You must either lighten the load or else put on a heavier belt. In ninety-nine cases out of a hundred the trouble will be entirely obviated by putting on a double belt. Rest assured that any kind of a daub placed on a belt will be a detriment instead of a help. The belt will run better for a few minutes, and then this stuff will collect on pulleys and in places on the belt, making it much worse than ever. The best dressing that I have ever seen for leather belting is a little castor oil. —*The Tradesman*.

OUR LEGAL DEPARTMENT.

Specially prepared for The United States Miller and Milling Engineer, from the latest decisions.

COMPENSATION OF PARTNER.—A partner is not entitled, unless under some special agreement to any compensation for his skill, labor or services while employed in the partnership business. He owes these gratuitously for the success and accomplishment of the partnership operations. A managing partner, who employs his minor children, with the consent of the other partner, is entitled to compensation for their services.—*Taylor v. Ragland*, Supreme Court of Louisiana, 8 South, Rep. 467.

LIABILITY OF RAILWAY COMPANY AS WAREHOUSEMEN.—In an action against a railroad company for freight alleged to have been lost while in its warehouse by its negligence, a charge that "if the company failed to deliver this freight, and undertook to deposit it in its warehouse, the liability of the railroad would be that of a warehouseman," is correct, as it submits to the jury the question whether the company delivered the freight to its agent to be deposited in its warehouse or to the owner.—*Georgia Railroad & Banking Co. v. Thompson*, Supreme Court of Georgia, 12 S. E. Rep. 640.

DAMAGES FOR CONSTRUCTION OF DAM.—Where a company constructs a dam across a natural stream, which flows down through lands of another and discharges the water thereby detained in larger amounts than the stream will carry, causing the same to overflow the land, it is guilty of a trespass, and liable for the injuries caused thereby, though it was authorized to construct the dam, and the same was constructed in a proper manner.—*McKee v. Delaware & H. Canal Co.*, Court of Appeals of New York, 26 N. E. Rep. 305.

ALTERATION OF NOTE AFTER SIGNATURE.—Where the maker of a note changes it after indorsement without the indorser's knowledge, by adding to his signature "& Co." thus making it the signature of a firm of which he is a member, the indorser is discharged from liability, even though the maker had no authority to bind the firm. Where the note did not show upon its face any evidence of an alteration, the burden was on the indorser to show the alteration. But, where, after the alteration, the indorser with knowledge thereof, writes above his name an express waiver of protest, and notice, this is a ratification of the alteration, though no new consideration passes. A stipulation in a note to pay costs for collecting on failure to pay at maturity does not destroy its negotiability.—*Montgomery v. Crosswait*, Supreme Court of Alabama, 8 South, Rep. 498.

ACCEPTANCE OF BENEFITS UNDER ASSIGNMENT FOR CREDITORS.—A creditor who has availed himself in any manner of what purported and was intended to be an assignment made by his debtor, the instrument being defective on its face, or has obtained and accepted benefits to be derived therefrom, for example, by making and delivering proof of his claim to the assignee, and thereafter, although notified of its allowance, permitting it to stand as a proved-up claim against the estate, bars himself from taking any action which will defeat the purpose of the instrument as a transfer of the property of the assignor.—*Olson v. O'Brien*, Supreme Court of Minnesota, 48 N. W. Rep.

PAYMENT BY DEPOSIT IN INSOLVENT BANK.—A fire insurance loss was ad-

justed and the amount due agreed upon. The agent of the company thereupon deposited in a local bank the amount due and notified the insured to call and get it. The notice was received after banking hours, and when the insured went to the bank the next day, to get his money, the bank had failed. This did not amount to payment by the company. Had the insured delayed in calling for the money, or had he agreed that it should be left there for him, it would have amounted to payment, but in selecting this method of payment without agreement the company assumed the risk.—*Clemons v. Livingston County Mutual Fire Insurance Co.*, Supreme Court of New York, 12 N. Y. Supp. 433.

RIGHT OF ACTION ON DISSOLUTION OF PARTNERSHIP.—When a firm is voluntarily dissolved and under the terms of the agreement for dissolution one of the former partners designated to liquidate the affairs of the concern, a right of action in his favor immediately arises, against a retiring partner whose account on the books is overdrawn beyond what could possibly be his dividend under the terms of the dissolution.—*Gray v. Green*, Court of Appeals of New York, 26 N. E. Rep. 253.

DIVERSION OF WATER FROM MILL.—In an action for the obstruction and diversion of a stream, it appeared that a dam was built above plaintiff's mill, and a three-inch pipe inserted, through which the water ran to a tank. Plaintiff introduced evidence that since the dam was constructed there was never enough water to furnish full power to his mill, while theretofore there had been enough to run it 10 months out of the year, and that before the loss of water the rental value of the mill was \$500 a year, and afterwards nothing. Defendant introduced evidence that the diminution of the stream was not due to defendant's dam and pipe, but to a general drying-up, and that plaintiff was not injured. The question was properly submitted to the jury, and a verdict for plaintiff would not be disturbed, as they are the sole judges of the facts.—*Marsh v. Delaware, L. & W. Ry. Co.*, Supreme Court of New York, 12 N. Y. Supp. 376.

FAILURE TO FULFIL CONTRACT FOR SALE OF GRAIN.—In an action by the buyer against the seller for breach of contract for the delivery of corn, the measure of damages is, as a general rule, the market value of the corn at the time and place of delivery, less the contract price. In such case, when the seller, after his contract of sale is made, notifies the buyer that he will not fill the contract, in the absence of any evidence on the part of the seller, that the buyer, after notice that the seller would not fill the contract, and before the date of delivery, could have purchased the corn in the market of the place of delivery, upon such terms as to have mitigated his loss, the measure of damages remains the same.—*York Draper Mercantile Co. v. Lush*, Supreme Court of Kansas, 25 Pac. Rep. 646.

CANADIAN FLOUR IN JAMAICA.

For an easy entrance to the markets of Jamaica is not secured for Canadian manufacturers and millers, it will not be for want of effort and enthusiasm on the part of Commissioner Adam Brown. A fortnight since he addressed the Board of Trade in this city, dilating eloquently on this paradise without the snake, and pointing out especially the favor with which Cana-

dian flour is received by the residents of this tropical clime. Before Canadian flour was introduced, he tells us, the bread of the natives was as bad as it could be. After tasting that made from Canadian flour the people of the island were demanding a better article and are now clamoring for their bakers to buy the product of our millers.

He would have the good reputation of Canadian millers carefully maintained, and remarks: "The fact is established beyond peradventure, that the flour of Canada, after the severest test possible, has stood the climate of Jamaica, and what is good for Jamaica, is good for all West Indian Islands, South America and all the tropical countries. We have established a reputation for our flour in tropical countries by this exhibition, and we must maintain it. Every miller who has sent flour there knows what he has sent. Therefore if we desire to keep this reputation it must be seen that the quality and character of the flour shipped there is up to the standard."

The Commissioner showed himself alive in meeting any unfavorable criticism that was passed upon the product of our millers. A circular from an American source was placed in his hands on April 23rd, questioning the keeping qualities of North-west wheat. He immediately caused bread to be made from Manitoba wheat flour, which had been four months in the island. It was as sweet as a nut. One hundred and fifty thousand pieces of bread baked from Canadian flour, varying between rolls, loaf bread and Scotch scones, were distributed among the visitors with the result, that "more, more," was the constant cry.

The *Gleaner* of Kingston, Jamaica, editorially remarks: The direct and somewhat novel appeal to the minds of many, by way of that ancient receptacle, the human stomach, has finally settled the question. To-day, thanks to the push, speeches and indefatigable efforts of Mr. Adam Brown, the Jamaica market is open to Canada, not only for flour but for a host of things. That gentleman has done his part, it now remains for the Canadian millers to do theirs. The future of this breadstuff question lies in their hands, and a hint to them—American competition will be all the keener after the Exhibition. Finally it is asserted that the British West Indies consume three million dollars worth per annum."

We have no fears but that our millers will practically demonstrate that as the markets of the world are further opened to them, they will with their usual enterprise, be prepared to meet with all the conditions required.—*The Canadian Miller*.

TRADE NOTES.

THE SUPERLATIVE PURIFIER MANUFACTURING CO.—A Mecklenburg operative writes to a German contemporary to say that he and his fellow journeymen are quite content to work from 14 to 18 hours a day for a weekly wages of five or six marks, that is to say, between 5s. and 6s. This is supplemented by board and lodging, and the same operative who is a very Mark Tapley, remarks that the food and bed provided are perfectly satisfactory. On the other hand a miller details his experiences in an Alsatian mill. The date of this story lies five years back, but the narrator hints that the same state of things is still prevalent in too many districts. The mill was a roller mill, and the "spells" were of 37 hours' duration; the resting-time is not specified, but was evidently all too short for the worn-out toilers. It appears that the spells were timed to finish at seven in the evening, but before the three men whose turn it was to "take an evening off" were discharged from duty they were usually required to unload a wagon heavily laden with grain, and that with the shoulders sore from carrying heavy sacks of flour. Six weeks of this kind of existence sufficed for the narrator, who adds that for many operatives one day in this mill was more than enough.

THE COCKLE SEPARATOR MANUFACTURING CO.—A Cockle Separator Manufacturing Co., of this city, have recently shipped Morgan Scourers to Brown Bros., Freeport, Ill., and Rail & McGlaughlin, Clarksville, Ia.

THE SUPERLATIVE PURIFIER MANUFACTURING CO.—A Superlative Purifier Manufacturing Co., of this city, have recently furnished New Era Scalpers to Plank

Bros. & Co., Galion, O.; Upton Darby & Son, Seneca, Md. (2d order); Aberdeen Mill Co., Aberdeen, S. Dak.; Jackson Milling Co., Stevens Point, Wis. (2d order); W. V. Hartwell, Plattsburgh, N. Y.; Appelt Bros., Detroit, Mich. (2 machines); Benton Harbor Mill Co., Benton Harbor, Mich. (2 machines); H. J. Klinger & Son, Butler, Pa.

THE COCKLE SEPARATOR MANUFACTURING CO.—A Cockle Separator Manufacturing Co., of this city, have an order for 2 No. 5 Morgan Scourers for the Minnesota Elevator, Chicago, Ill.

THE SUPERLATIVE PURIFIER MANUFACTURING CO.—A Superlative Purifier Manufacturing Co., of this city, have lately shipped two round reels to Henry Pettit, Kingston, Wis.; a bran-duster to Carman & Co., Petersburg, Ill., and a purifier to C. W. Armstrong, O.

THE VORTEX DUST COLLECTOR CO.—A Vortex Dust Collector Co., of this city, report a very steady and good trade on their Dust Collector. They have received and shipped orders for 125 machines the past month.

PARIS, Ill., Oct. 16, 1890.
The J. B. Allfree Co., Indianapolis, Ind.

GENTLEMEN:—Your favor of October 15 to hand and in reply will say, *your machinery is perfect from top to bottom*, and can cheerfully say that you have done us a fine job, which we are not ashamed to show to any miller or millwright. Everything is running in first-class order, and *your rolls are perfect in every respect*; also your other machinery is No. 1. *We are doing a good business; much better than we expected.* We wish you much success.

Yours very truly,
CARPENTER & WINN.

PERU, IND., Oct. 17, 1890.
The J. B. Allfree Co., Indianapolis, Ind.

GENTLEMEN:—The thirty-barrel short system roller mill you built for us this summer is running full time and doing excellent work. *Our flour has a ready market at home in competition with eight or ten old established brands that have been the pride of Peru for years.*

We believe your machinery is first-class in material and workmanship, and for light running, unexcelled. We scarcely notice the additional fuel required to run it.

Yours very truly,
SMITH, KING & CO.

GERMAN OPERATIVES.—A Mecklenburg operative writes to a German contemporary to say that he and his fellow journeymen are quite content to work from 14 to 18 hours a day for a weekly wages of five or six marks, that is to say, between 5s. and 6s. This is supplemented by board and lodging, and the same operative who is a very Mark Tapley, remarks that the food and bed provided are perfectly satisfactory. On the other hand a miller details his experiences in an Alsatian mill. The date of this story lies five years back, but the narrator hints that the same state of things is still prevalent in too many districts. The mill was a roller mill, and the "spells" were of 37 hours' duration; the resting-time is not specified, but was evidently all too short for the worn-out toilers. It appears that the spells were timed to finish at seven in the evening, but before the three men whose turn it was to "take an evening off" were discharged from duty they were usually required to unload a wagon heavily laden with grain, and that with the shoulders sore from carrying heavy sacks of flour. Six weeks of this kind of existence sufficed for the narrator, who adds that for many operatives one day in this mill was more than enough.

BABBITT BEARINGS.

ONSIDERABLE has been written upon the subject of babbitt bearings, and as the methods of different mechanics vary in babbitting a box, a variety of ways are presented to the reader. A writer in the *Stationary Engineer* gives his experience as follows: There are several things about babbitted boxes that have worried me not a little, for, although I have always got along with them fairly well, yet there were several things about them of which I craved more knowledge. My first effort to babbitt a loose pulley and get a satisfactory job of it extended through a couple of days, and one thing I learned was, that it was easier to melt out the babbitt than to try chipping it out. It was quite easy to melt it out by setting the pulley on blocks a few inches from the ground, so that the bore would act as a stack, and then building a fire of oil and waste under it. Dirty oil and dirty waste served the purposes, as well as saved time. To get a good fit on the shaft, and still have it so that the shaft or mandrel could be easily removed from the pulley, I found that good results were had if I first warmed the mandrel, and covered it with a coating of soap and fire clay. This I did by mixing the soap and fire-clay to a consistency of putty, and rubbing it on the warm mandrel. This left a very thin coating, but one which was thick enough to allow the mandrel to be easily removed after the babbitt metal had become set. The fire-clay, being free from grit, would have no injurious effect on the shaft, if a little of it should remain in the babbitt, but on the contrary it would assist in bringing it to a smooth bearing. And, by the way, this thing of wearing a journal down to a good fit in a babbitted box so that it will not run warm, is sometimes considerable of a trick. If the bearing is plenty large enough, and not much weight on the shaft, running at a low rate of speed, there is not much trouble in getting things to run cool; but when the shaft is run at a few hundred revolutions per minute a box must be in a pretty fair order, even when there is plenty of bearing surface, if the journal is to run without heating. But in starting up with a newly babbitted box, I have found that the worry could be soonest ended by using a preparation of hard oil or grease and fine sulphur, supplied in unlimited quantities for an hour or more. The bearing is sure to heat when new, and this mixture, I have found, would cure it just as soon as the heat of the journal became sufficient to melt the sulphur. Melted sulphur and oil when combined, as they will to certain extent, form a compound that produces a glazed surface on both journal and bearing, and this coating possesses considerable anti-friction qualities. I have found it a good plan in babbitting boxes to always wrap a sheet of paper around the shaft. This serves a good purpose in two ways. Paper is a good nonconductor of heat, so that the metal, when it is poured, is not immediately cooled by the journal, but retains the heat, and remains fluid much longer than that portion in contact with the box, so that the inside or wearing surface is left in a much smoother condition than when babbited on a mandrel, or after having been turned out, and the space left after the paper is removed serves a good purpose in permitting the oil to more readily flow under the journal.

The question as to the best style of grooves or oil channels to cut in a box is one that still appears to be in an unsettled condition; and judging from some of the elaborate patterns shown by the channels cut in some boxes that I have seen, the efforts of the workman must have been exerted toward providing as great an area for holding oil as that which he intended to be used as bearing surface. This, to me, appears all wrong, as I see no necessity for it, and more than that, it reduces the area of bearing surface to such an extent as to make it positively injurious. For distributing the oil what more is necessary than a groove cut in the cap extending from the oil hole on both sides to near the end of the cap? This will allow the oil to be distributed the full length of the bearing—if the cap fits reasonably close—and the slight space left by the paper which was wrapped around the shaft when the babbitt was poured will allow the oil to work down under the journal. In whatever position the oil hole may be, a single channel for the oil is all that I ever found necessary to obtain a free distribution. But if the top of the box does not come within a thirty-second of an inch or more of the journal, then the oil will not be distributed until it comes to the lower part of the box. Here the edges should be chamfered, with the exception of a small portion about one-eighth of an inch wide at each end, to prevent the oil from flowing out at the ends of the box.

MECHANICAL CURIOSITY.

What is there in a pile-driver or its operation, that stimulates human curiosity to such a noticeable degree? The putting up and setting in operation of a pile driver anywhere is sure to immediately draw a crowd, and keep a considerable portion of the people who compose it standing idly by to watch the monotonous repetition of the movement of the pile-driver's simple machinery and heavy weight, which is drawn up and then let go, to come down with a thud on the top of the unoffending and helpless stick of timber, driving it every time a few inches deeper into the mud. Wherever this operation is going on, you will see a crowd of from a dozen to one hundred and fifty men and boys, who appear to take as much interest in it as they would in a Punch and Judy show or a dog fight. We do not understand where the curiosity-exciting element is. After one has seen the big thumper go up and come down once, he has seen all he ever will see of the mystery of pile-driving. Yet crowds of idlers are found hanging around the pile-driver's station for hours. Are these people really curious, or are they only lazy and loafing?—*The Evening Journal* (Jersey City).

HUNGARIAN METHOD OF MAKING BREAD.

At Debretzin, in Hungary good bread is made by the following process, without yeast: Two large handfuls of hops are boiled in four quarts of water; this is poured upon as much wheaten bran as it will moisten, and to this are added four or five pounds of leaven. When this mass is warm the several ingredients are worked together till well mixed. It is then deposited in a warm place for twenty-four hours, and afterwards divided into small pieces about the size of a hen's egg, which are dried by being placed upon a board, and exposed to a dry air, but not to the sun; when dry they are laid up for use, and may be

kept six months. The ferment thus prepared is applied in the following manner: For baking six large loaves, six handfuls of these balls are dissolved in seven or eight quarts of warm water; this water is poured through a sieve into one end of the bread trough, and, after it, three quarts of warm water, the remaining mass being well pressed out. The liquor is mixed up with sufficient flour to form a mass of the size of a large loaf; this is strewed over with flour, the sieve with its contents is put upon it, and the whole is covered up warm, and left until it has risen enough, and its surface begun to crack. This forms the leaven or sponge. Fifteen quarts of warm water, in which six handfuls of salt have been dissolved, are then poured upon it through the sieve; the necessary quantity of flour is added (after the water and leaven or sponge is well mixed), and the dough is then well kneaded. This is left, covered up warm, for half an hour or more in a warm place. It is then formed into loaves, and left another half-hour to prove, before being placed in the oven, where they remain from one to two or three hours, according to their size. The great advantage of this kind of ferment is that it may be made in large quantities at a time for use, and would be found convenient for sea voyages, etc., or for persons living at a distance from any town, and where yeast cannot be readily procured.

PRIMING OF BOILERS.

Air or water, in moving from all sides to a common center, at which it escapes, does not move in direct lines, but approaches the center in spiral currents, the velocity of which will be proportional to the speed at which the fluid escapes at the center. Let the water from a bucket or basin escape through a hole at or near the center of the bottom, and the water in the vessel will form in a whirling current around a vertical line above the outlet. If the water escapes through a pipe so that there will be a downward suction, the velocity of the whirling current will be increased. A storm center or area of low barometric pressure is another illustration. Towards such an area all of the air currents influenced by it will move, the same as water in a maelstrom moves toward the center. Now the question is, will not steam escaping from a boiler directly upward into a dome or steam pipe act in the same manner as water does in escaping from a bucket or basin, or as air does in moving towards a storm center? In this connection it should be remembered that a storm center is a point where the air is escaping upward, and that it is the escaping air which causes the water in the basin to form into a whirling current around the outlet.

It is well known that in the center of a whirling current the fluid, owing to centrifugal force, is rarefied, and the degree of rarefaction depends entirely upon the velocity of the whirling current; for this reason a whirlwind of sufficient velocity passing over the water causes a water spout. Now if the steam escaping from a boiler in the usual manner causes the steam in the boiler and in a small area below the outlet to form in a whirling current, the velocity of which will increase as that of the escaping current increases, what is to prevent a waterspout in the boiler and a wrecked engine as the result whenever the escaping steam reaches a sufficient velocity, if the pipe connecting engine with boiler is of a sufficient area.—*Ward Stone in Scientific American.*

American Steam Gauge Co.**SOLE MANUFACTURERS****Bourdon Steam Gauges****WITH LANE'S IMPROVEMENT.****THOMPSON'S****Improved
Indicator****AMERICAN POP SAFETY VALVES****For Locomotive, Stationary and Portable
Boilers, and Instruments Inciden-
tal to the use of Steam. Send****for Price List I.****36 Chardon St., BOSTON, MASS.****Send for Catalogue K.**

A NY mechanic who feels like despairing, because the world has not gone well with him, should try, first of all, to figure out to what extent the world is to blame for his failure, and to what extent he himself is to blame. If he has not fitted himself for success, it is his own fault that success has not come to him.

A TRAVELER comes back from Mexico with a new idea which he hopes to utilize in the manufacture of flour. He notes that for centuries the Mexicans have been accustomed to parch their grain before grinding it, and claims to have discovered that the heat gives the flour a sweetness and a fragrance unknown in the flour of the ordinary brands and at the same time adds much to its powers of nutrition. Mills are to be equipped with apparatus for parching the wheat before putting it into the hopper, and we are told that the result will be a culinary revolution.—*Chicago Herald.*

GOOD ADVICE.—Never attempt to screw up bolts or nuts that are close to the cutter heads when the machine is running, says the *Timberman*. Your wrench might slip and your hand come in contact with the knives as many others have done and then you find yourself minus a finger or perhaps a hand, it will be no light matter and you will then find that you did not look out. Whenever a bolt or nut in close proximity with the cutters needs adjusting, stop the machine like a sensible man and then you will take no chances. In setting knives and cutters always test every bolt and nut before you start, as you may possibly have omitted one, and if not attended to in time, look out.

THE BREAD OF POVERTY.—Some time ago it was reported that a new disease had appeared among the peasants of the Government of Kazan and in the neighboring districts. The symptoms were acute colics, swelling of the limbs, and distension of the belly. It was fatal in many instances where medical treatment had not been promptly applied. Now, Dr. V. D. Orloff reported to the medical association that he believed the cause of this disease to be "the bread of poverty" which the famished population eats. For want of rye, wheat or potatoes they bake bread of acorns. The resinous substances contained in the latter are the cause of the symptoms of the so-called new disease. The doctor has studied the subject, and found that all that is required for the cure of that disease is a thorough cleaning of the bowels and a healthful diet for the patient.

MANUFACTURING SITES FOR SALE!

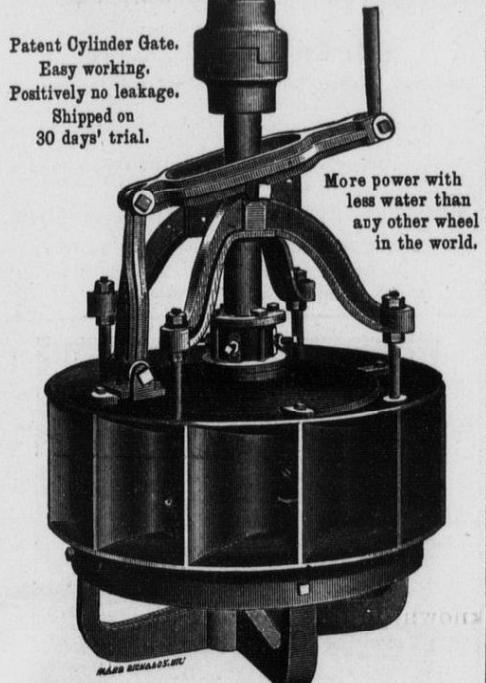
The undersigned owns a few of the *best* manufacturing sites in the city of Milwaukee, adjoining those now occupied by the *Milwaukee Car Wheel and Foundry Co.* and the magnificent plant of the *Fuller-Warren Stove Works* which cover nearly ten acres of ground. Best of railroad facilities. Parties desiring a suitable location should investigate this. Address,

E. HARRISON CAWKER,

36 & 37 Loan & Trust Building.

MILWAUKEE, WIS.

THE IMPROVED WALSH Double Turbine Water Wheel



Patent Cylinder Gate.
Easy working.
Positively no leakage.
Shipped on
30 days' trial.

More power with
less water than
any other wheel
in the world.

MANUFACTURED BY
B. H. & J. SANFORD
SHEBOYGAN FALLS, WIS.

For special figures mention this paper.

A PRACTICAL TREATISE ON MILL-GEARING
Wheels, Shafts, Rammers, etc., for the use of
engineers, with eleven plates. T. Box. Third
edition. 12 mo. \$3.00.
FIVE HUNDRED AND SEVEN MECHANICAL
Movements, embracing all those which are most
important in Dynamics, Hydraulics, Hydrostatics,
Pneumatics, Steam Engines, Mill and other
Gearing, Presses, Horology and Miscellaneous
Machinery. H. T. Brown. Sixteenth edition. 12
mo. \$1.00.
A TREATISE ON MILLS AND MILL WORK. W.
Fairbairn. 8 vo. \$8.75.
A POCKET MANUAL OF USEFUL INFORMATION
for Mechanical Engineers. Steam Users and
Mechanics. J. W. Hill. Illust. 12 mo. \$1.25.
A MANUAL OF MACHINERY AND MILL WORK.
W. J. M. Rankine. Fifth edition, thoroughly re-
vised by W. J. Millar, with nearly 300 illustrations.
12 mo. \$5.00.
TEMPLETON'S ENGINEER, MILLWRIGHT AND
Mechanic's Pocket Companion, revised, corrected
and enlarged from the Eighth English edition by
Julius W. Adams. \$2.00.
A TREATISE ON FRICTION AND LOST WORK IN
Machinery and Millwork. R. H. Thurston. 61 il-
lustrations. 8 vo. \$3.00.
THE PRACTICAL AMERICAN MILLWRIGHT AND
Miller, by David Craig, millwright. Illustrated
by numerous wood-engravings and two folding
plates. 432 pp. 8 vo. \$5.00.
AMERICAN MILLER AND MILLWRIGHT'S AS-
sistant, by Wm. Carter Hughes. 12 mo. \$1.50.
THE MILLER'S, MILLWRIGHT'S AND ENGI-
neer's Guide, by Henry Palett. Illust. 236 pp.
12 mo. \$2.00.
PRACTICAL HINTS ON MILL BUILDING, by R.
J. Abernathy. Illust. 8 vo. \$4.00.

BOOKS.

Any of the books in this list will be sent by mail,
free of postage, to any part of the world, upon re-
ceipt of price. Address and make all drafts payable
to the order of

E. HARRISON CAWKER,
36 & 37 Loan & Trust Bldg., MILWAUKEE, WIS.

June, July and August.

The most charming Summer Resorts, of
which there are over three hundred choice
locations, are to be found in Wisconsin,
Iowa, Minnesota, South Dakota and the
Peninsula of Michigan, along the lines of
the Chicago, Milwaukee & St. Paul Ry.
Nearly all are located near lakes which have
not been fished out.

These resorts are easily reached by rail-
way and range in variety from the "full
dress for dinner" to the flannel-shirt costume
for every meal.

September and October.

The finest shooting grounds in the North-
west are on and tributary to the lines of the
Chicago, Milwaukee & St. Paul Ry. The
crop of Prairie Chickens will be exception-
ally good this year; also Ducks and Geese.
In Northern Wisconsin and the Peninsula of
Michigan splendid Deer shooting is to be had.
Full information furnished free. Address,
GEO. H. HEAFFORD, Gen. Pass. Agt.
Chicago, Ill.

INTEREST FOR SALE.

WILL SELL or take partner in a 100-
barrel steam flouring mill, fitted with the
best and latest improved machinery, situated
in the best wheat belt of Nebraska. Does a
very large exchange business. Has side-
track which facilitates shipping and gives
excellent opportunity for conducting elevator
business. Has a large cash trade, and is
located so as to control flour market of North-
western Nebraska, Northern Wyoming and
Southern Dakota. Address,

KLOMAN & ARNOLD,
6-8t BROKEN BOW, NEB.

A BIG SNAP.

To close out a partnership, we offer for
sale our 50-barrel Richmond City Mill Works'
short system roller mill, located at Mitchell-
ville, Tenn., and enjoying good exchange
trade. Two members of the firm engaged in
other business is the reason for selling.
Write for full description. Reduced R. R.
fare on July 4. Address,

W. H. BLAKELEY & CO.,
6-1t BOWLING GREEN, KY.

A. B. MYERS,

371 Broadway.

FOR SALE—REAL ESTATE.

Lot 84x127, Merrill Park, cheap.
Lot 75x150, Wells near Twenty-Seventh Street.
House and lot 40x150, on Fifteenth Street.
House and lot 35x140, on Eighteenth Street.
House and lot 40x135, Seventeenth Street.
House and lot 30x135, Seventeenth Street.
House and lot 60x200, Grand Avenue.

House and lot 60x140, Twenty-first street, cheap.

Lots in Murray Hill, Greystone Park, Oakland
Heights, Fairview, Euclid Park, Phoenix Park, Atma
Park and Government Heights are for sale at low
prices and on the same easy terms as heretofore, and
they are bought by parties who intend to build nice
homes. More than one-half of all lots in the above
subdivision have been sold. It is unnecessary to use
a club to convince anyone that sees these lots that
they are sold at very low prices. If you want anything
in the real estate line call on or write

A. B. MYERS,
371 Broadway.

SECOND MILLER WANTED.

We want a good man as second miller for
general work in our roller mill. Capacity, 75
bbls. Must be a German, and a married
man preferred. Steady employment for the
right man. For further information address
or apply personally to

REDDYMAN, JAEGER & CO.,
5tf Danville Wis.

MILLER WANTED.

A good miller, in a 50 barrel roller and
stone mill, located in Wisconsin. One that
knows how to dress stones. For further
particulars address,

Y. A. P.,
Care UNITED STATES MILLER,
Milwaukee, Wis.

H. G. UNDERWOOD

(Successor to STOUT & UNDERWOOD)

Attorney at Law
And Solicitor of
PATENTS

107 Wisconsin Street,

TELEPHONE NO. 502. MILWAUKEE.

6-1y Practices in all United States Courts.

DO YOU INTEND TO BUILD? PRACTICAL LOW-COST HOUSES?



A Large Atlas, containing drawings and floor plans
of 40 Modern Houses with Correct Estimates of cost
of building. All kinds of buildings ranging from a \$400
cottage to a \$10,000 residence. The latest, most com-
plete, and only practical house plan published. It is false
economy to attempt to build without these plans. Price by
mail, post-paid, 50 cents. Stamp taken.

Address:

UNITED STATES MILLER and MILLING ENGINEER
MILWAUKEE, WIS.

MILL SITE FOR SALE.

In Marshall County, Kansas, on Little Blue River. Never failing water
power. Mill burned recently and property will be sold CHEAP. 6½ acres of
land, two dwellings, granary, barn, scales, wheels set in flume, ready to couple
to, stone dam, walls of building still standing. For particulars address,

F. F. THORNE, Assignee,

WATERVILLE, KANS.

FOR SALE In Wisconsin.

125-bbl. roller flour mill, 4 stories, frame with stone basement, including plenty water
power for 4 water wheels. Flum-, dam and mill in good condition. Frame warehouse
and office close by, and long sheds for farmers' teams. The whole property in full
operation 16 hours daily, doing profitable business. Has big grist business. City of
2,000 population; two railroads. Good trade with citizens, farmers and lumbermen, for
flour, feed and rye. Good local grain, and plenty of it. Good place to live, has good
schools and churches, and close to other large cities. Owner non-resident, which is
the reason for selling. Address,

4-1f

MENASHA WOOD-SPLIT PULLEY CO., Menasha, Wis.

FLOUR MILL FOR SALE.

A RARE BARGAIN.

Following is a list of the machinery: One Schwartzwalder Scourer; one Victor Brush Machine; one
Cockle Machine and Steam Wheat Heater; one 9x18 Double Chain Odell Roll; one 9x30 Double Odell Roll;
three 9x24 Double Odell Rolls, or breaks on wheat; four 9x24 Stone Rolls for Middlings, and three pair
Middling Stones; three Garden Bits and five Smith Purifiers; one Three Break Scalper and sixteen Flour
Reels; three Fitcher and two "Silver Creek" Centrifugal Reels; two Richmond Bran Dusters; one Hughes
Ship Stuff Duster; one Bran Packer; four Flour Packers; one Five Ton Platform Suspension Scale;
Barnard & Leas' Separator to Grain Bins.

The above machinery is all of the latest improved, and has been run very successfully. Capacity of
mill, twenty-four hours, 350 barrels. Driven by one 18x42 Reynolds' Corliss engine and one 180 H. P. Heine
Safety Boiler. If desired, we will take pleasure in furnishing a more minute description, with price,
terms, etc. The mill is situated on Fifth and Center streets, Little Rock, Ark. A bird's-eye view of Little
Rock, showing location of mill, will be sent on application. For further particulars address,

THE ARKANSAS PRESS, LITTLE ROCK, ARK.

ENGINE AND BOILER FOR SALE.

A 25 horse-power Reynolds Corliss engine, with 40 horse-power boiler
and heater and connections, all in first-class condition and in use at present.
To be delivered in July, 1891. A bargain for anyone in need of same. Reason
for selling, more power required. For further information address,

RIVERSIDE PRINTING & ENG. CO.,

11tf 218-220 Third Street, MILWAUKEE, WIS.

HALF INTEREST IN ROLLER MILL.

FOR SALE—One-half interest in a full
roller mill, 50 barrels capacity, located in
railroad town of 500 population, doing a
splendid business and making money. Best
of reasons given for selling. An excellent
chance for a practical miller with small
capital. Address,

W. E. WELLS,
6-1t Lock Box 173, BIRDSEYE, IND.

FOR SALE In Genesee Co., N. Y.

PIECE OF MILL PROPERTY, 25 acres,
two houses, with a twenty-two foot fall of
continuous, unfailing spring water supply.
This property is within a few rods of the
West Shore Railroad and in a great custom
business vicinity. Will advance money to
rebuild on small payment. For particulars
address,

T. CARY,
BATAVIA, N. Y.

ORGANIZATION OF MILLERS IN THE UNITED STATES.

THE MILLERS' NATIONAL ASSOCIATION.

President—A. R. JAMES, Buffalo, N. Y.
1st Vice-Pres't—H. L. HALLIDAY, Cairo, Ill.
2d Vice-Pres't—L. C. PORTER, Winona, Minn.
Treasurer—S. H. SEAMANS, Milwaukee, Wis.
Secretary—FRANK BARRY, Milwaukee, Wis.

BOARD OF DIRECTORS.

	STATE.	OFFICERS OF STATE ASSOCIATIONS.
*C. B. Cole, Chester	ILLINOIS	President, E. C. Kreider, Jacksonville. Secretary, C. H. Seybt, Highland.
M. S. Blish, Seymour	INDIANA	President, F. E. C. Hawkes, Goshen. Secretary, E. E. Perry, Indianapolis.
C. R. Underwood, Salina	KANSAS	President, B. Wurkinten, Newton. Secretary, W. T. Hopkins, Enterprise.
P. H. Macgill, Baltimore	MARYLAND	President, P. H. Macgill, Baltimore. Secretary, J. O. Norris, Baltimore.
*W. B. Knickerbocker, Albion	MICHIGAN	President, W. B. Knickerbocker, Albion. Secretary, M. A. Reynolds, Stanton.
*A. C. Loring (chairman), Minneapolis	MINNESOTA	President, F. L. Greenleaf, Minneapolis. Secretary, W. C. Edgar, Minneapolis.
Geo. H. Plant, St. Louis	MISSOURI	President, S. M. Carter, Hannibal. Secretary, H. C. Craft, St. Louis.
C. C. White, Crete	NEBRASKA	President, O. A. Cooper, Humboldt. Secretary, D. H. Harris, Bennett.
*Geo. Urban, Buffalo	NEW YORK	President, A. R. James, Buffalo. Secretary, H. P. Shuttleworth, Buffalo.
Jno. M. Turner, Mandan	NORTH DAKOTA	President, J. S. Hillyer, Bismarck. Secretary, J. M. Turner, Mandan.
Homer Baldwin, Youngstown	OHIO	President, Homer Baldwin, Youngstown. Secretary, M. H. Davis, Shelby.
W. Latimer Small, York	PENNSYLVANIA	President, B. F. Isenberg, Huntingdon. Secretary, L. Levan, Lancaster.
W. H. Stokes, Watertown	SOUTH DAKOTA	President, L. G. Beynon, Brookings. Secretary, C. A. Lum, Aberdeen.
*Wm. Sanderson, Milwaukee	WISCONSIN	President, E. J. Lachmann, Neenah. Secretary, L. R. Hurd, Milwaukee.

* Members of Executive Committee.

THE MUGH-TRAVELED IRISHMAN.

"The Living Church," Chicago.
 'Tis twelve months since I came to America
 The fortune of me uncle to enjoy.
 Bless his name! Shure he left me the whole av it,
 And in his will he said, "Now Pat, me boy,
 Ye's ought to spind a solid year in thavelin',
 The great soights av this country for to see."
 And sure my uncle didn't need to urge me much
 For thavelin' is a trick that just suits me.

So I've thavelied over all this mighty nation,
 From north to south and from the east to west;
 I've thavelied both on land and on the wather,
 But shure the railroad thaveling suits me best.
 And of all the fine railroads in America,
 And meself shure has thavelied on them all,
 The one that heads the list for solid comfort
 Is the Chicago, Milwaukee and St. Paul.

Both for aitin and for dhrinkin and for shiapin,
 Their equipment is most costly and complete.
 Their splendor enough for old King Solomon,
 And dainties for his thousand wives to ate.
 O! I've thavelied all up and down America,
 The railroads and the shteamboats, tried them all,
 But there's nothing can compare in solid comfort
 Wid the Chicago, Milwaukee and St. Paul.

A MEMBER WHO SAW IT HIMSELF.

In the Wisconsin legislature of three or four years ago there was a certain member who had been elected by the grangers with the understanding that he should vote against anything which partook of the nature of a monopoly, trust, or combine, and favor about everything which didn't. Certain parties wanted to dam a certain stream, and certain other parties were bitterly opposed to it. Each had its lobbyist, and the opposition got hold of the granger member first. They stuffed him full of figures as to the acreage of land which must be overflowed, the financial loss to farmers, and gave an estimate that the slack water would increase the death rate along the stream 50 per cent. When the lobbyist for the mill dam got the ear of the member he was very ungraciously received, but he proceeded to say:

"I don't deny that our dam will raise the water and flood some land—perhaps the 200 acres claimed. In summer time the slack water may also add a trifle to the sick list; but, sir, what inspires the opposition?"

"Public spirit for public good, I believe."

"Does it? Have they made you believe any such nonsense as that? Can't you see through the gauze which veils their efforts?"

"Is there any—any trickery here?"

"Is there? Dead loads of it, sir, and I wonder that you haven't discovered it. These parties own a big cat-tail swamp half a mile above where the dam is to be. Our water will cover the swamp. They have discovered a way to mix cat-tail fuzz and geese feathers together to make feather beds, patented the idea, and propose to pull the market and run one-half the geese of America out of the country."

"No!"

"That's the scheme; and even while keeping it as quiet as they could, enough has leaked out to boost the price of goose oil 30 per cent."

"Why, it's a monopoly!"

"That's what it is—the biggest kind of a monopoly—a corporation without a soul. Why, you can't buy a goose bone now for less than 25 cents, and quill toothpicks will soon be a nickel apiece!"

"I see—I see. The scoundrels! Well, you shall have my vote and influence, and I thank you for setting me right. I might have played right into their hands—the wretches!"

And he not only voted for the bill, but worked for it and secured its passage, and the opposition could never get his ear for any denials or explanations.

—N. Y. Sun.

"CATALOGUE of Farm Lands, Coal Lands, Iron Lands, Timber Lands, Improved Farms with full description, price and terms, of properties for sale on the line of Queen & Crescent Route." The above is the title page of a very neatly gotten up catalogue, of sixty pages, which is being mailed free to all persons who will make application to Mr. D. G. Edward, the General Passenger Agent, at Cincinnati, O.

THE CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS RAILWAY.**BIG FOUR ROUTE****BETWEEN****CHICAGO****INDIANAPOLIS****AND CINCINNATI.**

The Only Line running the Popular Buffet Sleeping Cars between

CHICAGO and CINCINNATI

The Only Line from Chicago running Solid Vestibule Trains into Central Union Depot, Cincinnati, where connection is made with Through Car Lines for Florida, avoiding all disagreeable transfers.

Through Tickets via the Big Four Route can be procured at all Ticket Offices in the Northwest.

O. C. MURRAY, Traffic Manager. **D. B. MARTIN,** Gen'l Pass'r Agent. **CINCINNATI, O.**



This is not a puzzle, neither is it a theorem in geometry, it is merely intended to call attention to the fact that the **WISCONSIN CENTRAL LINES** form the direct route between Chicago and Milwaukee and the points named above. Through Fast Trains with Pullman Vestibuled Drawing Room Sleepers, Meals served in the "Central's" famous Dining Cars.

For tickets, Sleeping Car reservations, time tables, etc., apply at City Ticket Office, 99 Wisconsin Street, or at New Passenew Station, Fourth Ward Park.

"THE FINEST ON EARTH."

The Cincinnati, Hamilton & Dayton R. R. is the only line running Pullman's perfected safety vestibuled trains, with chair, parlor, sleeping and dining car service between Cincinnati, Indianapolis and Chicago, and is the only line running through reclining chair cars between Cincinnati, Keokuk and Springfield, Ill., and combination chair and sleeping car Cincinnati to Peoria, Ill., and the only direct line between Cincinnati, Dayton, Lima, Toledo, Detroit, the lake regions and Canada.

The road is one of the oldest in the State of Ohio and the only one entering Cincinnati over twenty-five miles of double track, and from its past record can more than assure its patrons speed, comfort and safety. Tickets on sale everywhere, and see that they read C. H. & D., either in or out of Cincinnati, Indianapolis or Toledo. E. O. McCORMICK, General Passenger and Ticket Agent, Cincinnati, Ohio.

RECENT MILLING PATENTS.

The following list of Patents for Milling and Grain Handling Appliances, granted in June, 1891, is specially reported for the UNITED STATES MILLER AND MILLING ENGINEER by H. G. Underwood, Patent Attorney and Solicitor of Patents. No. 107 Wisconsin Street, Milwaukee, Wis., who will send a copy of any patent named, to any address for 25 cents.

- No. 453,439, Bolting-reel, Alexander Dobson, Beaverton, Canada.
- No. 453,532, Fanning-mill, Thomas M. Bales, Doublin, Ind.
- No. 453,805, Grain-meter, Jacob O. Wyman, Fargo, N. D.
- No. 453,413, Grain-shoveling Device, Allen G. Mather, Milwaukee, Wis.
- No. 4,323,232, Grain-separator, Larkin G. Caldwell, Sheblina, Mo.
- No. 453,885, Dust-screen, Milton J. Farquhar, Francis Farquhar and Henry B. Farquhar, Wilmington, Ohio.
- No. 453,981, Grinding-mill, Jonathan D. Mawhood, Richmond, Ind., assignor to the Richmond City Mill Works, same place.
- No. 454,159, Grain-scourer, William B. Anthony, Cetronia, Pa.
- No. 454,065, Scalping-machine, James Pye, Minneapolis, Minn.
- No. 454,130, Support for shaking screens, William D. Gray, Milwaukee, Wis., assignor to the Edward P. Allis Company, same place.
- No. 454,131, Support for shaking screens, William D. Gray, Milwaukee, Wis., assignor to the Edward P. Allis Company, same place.
- No. 454,132, Support for shaking screens, William D. Gray, Milwaukee, Wis., assignor to the Edward P. Allis Company, same place.
- No. 455,140, Combined Dust-collector and Aspirator, Abraham N. Wolf, Allentown, Pa.
- No. 455,182, Grain-scouring Apparatus, Julius Szawinsky and Stelian Grozea, Braila, Roumania.
- No. 454,931, Apparatus for testing grain, Paul Heinsdorf, Hanover, Germany.
- No. 454,898, Grain measurer, John B. Bartholomew, Des Moines, Iowa.
- No. 454,950, Combined scalper and purifier, Delos Sewell, Buffalo, N. Y.
- No. 454,940, Separator, John H. Driller, Los Angeles, Cal.

THE CHICAGO AND NORTH-WESTERN RAILWAY.

Affords unrivaled facilities for transit between the most important cities and towns in Illinois, Iowa, Wisconsin, Northern Michigan, Minnesota, North and South Dakota, Nebraska and Wyoming.

The train service is carefully adjusted to meet the requirements of through and local travel and includes **Fast Vestibuled Trains**

—OF—
 Dining Cars, Sleeping Cars and Day Coaches
 Running Solid between Chicago and
ST. PAUL, MINNEAPOLIS, COUNCIL BLUFFS, OMAHA, DENVER and PORTLAND, ORE.

Pullman and Wagner Sleepers
CHICAGO to SAN FRANCISCO WITHOUT CHANGE.

COLONIST SLEEPERS
CHICAGO TO PORTLAND, ORE. and SAN FRANCISCO.

FREE RECLINING CHAIR CARS
CHICAGO TO DENVER & PORTLAND, ORE.
 Via Council Bluffs and Omaha.

For time of trains, tickets and all information, apply to Station Agents of the Chicago & North-Western Railway, or to the General Passenger Agent at Chicago.

W. H. NEWMAN, J. M. WAITMAN, E. P. WILSON,
 3d Vice-Pres. Gen. Manager. Gen. Pass. Agt.



Fast Mail Line with Electric Lighted and Steam Heated, Vestibuled Trains between Chicago, Milwaukee, St. Paul and Minneapolis.

Trans - Continental Route with Electric Lighted and Steam Heated Vestibuled Trains between Chicago and Council Bluffs, Omaha or St. Paul and the Pacific Coast.

Create National Route between Chicago, Kansas City and St. Joseph, Mo.

6700 Miles of Road reaching all principal points in Illinois, Wisconsin, Minnesota, Iowa, Missouri, South Dakota and North Dakota.

For Maps, Time Tables, rates of passage and freight, etc., apply to the nearest station agent of the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY, or to any Railroad Agent anywhere in the World.

ROSWELL MILLER, A. V. H. CARPENTER, General Manager. Gen'l Pass. and Tkt. Agt.

For in formation in reference to Lands and Towns owned by the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, write to H. G. HAUGAN, Land Commissioner, Milwaukee, Wisconsin.

Choice of 3 Trains

VIA
MONON ROUTE

BETWEEN
CHICAGO and INDIANAPOLIS, CINCINNATI, LOUISVILLE, LEXINGTON.

Unsurpassed Pullman Car Service.

Fast Trains. Sure Connections.

Short Route to Florida.

Be sure your tickets read via Monon Route (L. N. A. & C. R'y), and your comfort is guaranteed.

For Maps, Guides, etc., address

JAMES BARKER, Gen'l Pass'r Agent, CHICAGO.
 Adams Express Building.

Grand Haven Route

D. G. H. & M. R.Y.

THIS FAVORITE SUMMER ROUTE WITH ITS PALATIAL IRON STEAMERS

CITY OF MILWAUKEE and WISCONSIN
 AND FIRST-CLASS TRAIN SERVICE IS NOW OPEN.

Steamers leave Milwaukee daily (except Saturdays) at 8:00 p. m., connecting at Grand Haven with limited Express, which leaves at 5:40 a. m., Grand Rapids 6:45 a. m., Saginaw 11:00 a. m., Detroit 11:50 a. m., Toronto 8:20 p. m., Niagara Falls 7:50 p. m., Montreal 7:45 a. m., New York 10:25 a. m., Boston 3:00 p. m.

BUFFET PARLOR AND SLEEPING CAR SERVICE

Tickets on sale at all coupon ticket offices; company's office, 99 Wisconsin St., and at dock, foot of West Water St.

JOHN W. LOUD, Traffic Manager. **B. G. MEDDAUGH**, Passenger Agent. DETROIT. 99 Wisconsin St., MILWAUKEE.

OCEAN.

White Star, Inman, Cunard, Anchor, Bremen, Hamburg, French, and all other lines.

Cabin plans and sailings sent by mail and rooms secured in advance.

Very Cheap Steerage Rates, British ports and Milwaukee, \$31.50.

B. C. MEDDAUGH, Gen'l Steamship Agent, 99 Wisconsin St., cor. Broadway, Milwaukee.

ASHLAND**MILSAW.RY.****ROUTE****THE MILWAUKEE.****LAKE SHORE &****WESTERN R'Y**

Through Sleeping and Parlor Car Line

FAST TRAINS**CHICAGO AND MILWAUKEE**

TO **Appleton, Wausau** **& Ashland**

THE GOGBEC, PENOKEE AND MONTREAL IRON AND MINERAL RANGES.

Hurley, Ironwood, Bessemer and Wakefield

The Manufacturing Centers and Lumbering Districts of Central and Northern Wisconsin.

SHEBOYGAN, MANITOWOC, KAUKAUNA, APPLETON, WAUSAU, ANTIGO, EAGLE RIVER AND RHINELANDER.

The only line reaching the celebrated fishing resorts of Northern Wisconsin and Michigan.

Gogebic, Tomahawk and Pelican Lakes, Rhinelander, Eagle Waters, Twin Lakes, Lake Vieux Desert, Watersmeet.

The ONTONAGON, BRULE and other Trout Streams.

Noted for their excellent Muskalonge, Bass, Pike Pickerel and Trout fishing.

DIRECT LINE

Via New London Junc. and G. B. W. & St. P. R. R.

FOR **SEYMOUR, GRAND RAPIDS, AND STEVENS POINT.**

VIA **ASHLAND** and **NORTHERN PACIFIC R. R.**

FOR **SUPERIOR, DULUTH, PACIFIC COAST AND INTERMEDIATE POINTS.**

Guide Books, Maps, Time Cards and full information furnished on application to the Gen'l Pass. Agt.

Chas. L. Ryer, Gen'l Agt. 187 Clark Street, **CHICAGO.**

A. W. Russell, City P. & T. Agt. 187 Clark Street, **CHICAGO.**

Milwaukee City Office, 95 Wisconsin Street.

H. F. WHITCOMB, ERNEST VLIET, General Manager. Gen. Pass. Agt.

MILWAUKEE, WIS.



94 Miles the Shortest, 8 Hours the Quickest,

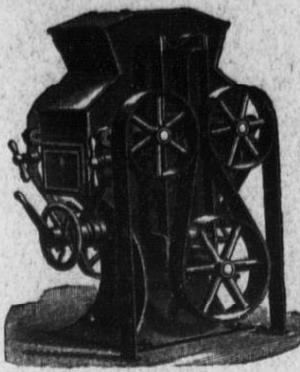
CINCINNATI TO NEW ORLEANS

Time, 27 Hours.

Entire Trains, Baggage Car, Day Coaches and Sleepers run through without change.

110 Miles the Shortest, 7 Hours the Quickest,

Cincinnati to Jacksonville, Fla.

THE KEYSTONE
4 ROLLER WHEAT MILL.

Flour Mills.

Corn Mills.

Hominy Mills.

ST. FRANCIS, KAN., October 5, 1890.
THE J. B. ALLFREE CO., Indianapolis, Ind.:

Dear Sirs—In reply to yours, we have been running six weeks, and can say that your rolls are the best we have ever handled. They have not given us any trouble since we started, and the adjustments cannot be beaten, and the flour dressers and centrifugals are "daisies." They work just like a charm, and the cleaner and scalper do splendid work. They can not be beaten. All the other machinery, shafting, pulleys and everything is fitted up so nicely that there is no trouble to set it up. We can make fifty barrels of flour in 24 hours from No. 3 wheat. Our wheat is very poor and our flour is giving very good satisfaction and The J. B. Allfree Co. is the best firm we ever had any dealings with. They did more than the contract called for. If we need any more machinery after this, they will get the order.

Yours very truly,

JENKINS & NEWBAUER.

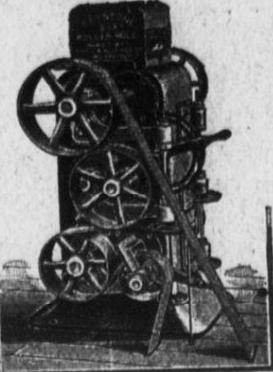
HAUBSTADT, IND., October 16, 1890.

The J. B. Allfree Co., Indianapolis, Ind.:

Gentlemen—In response to your inquiry of Oct. 15, would say we are pleased to state that we have run the mill about three months and are doing first-class work, and think you ought to brand all your machines the same as you do your bolter "Success." We have this day mailed you a sample of our Climax Patent, of which we make 75 per cent. Beat it if you can.

Wishing you success, we remain your friends,

ZILIAK & SCHAFER MILLING CO.

THE KEYSTONE
6 ROLLER CORN MILL.

Address, THE J. B. ALLFREE MFG. CO., 76 to 86 Shelby St., INDIANAPOLIS, IND.

ROPP'S + CALCULATOR.

[Revised Edition for 1890]

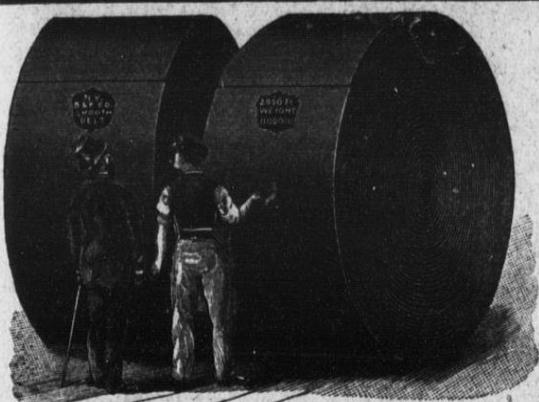


This book with its numerous tables, short cuts in figures, etc., is simply invaluable to Millers, Grain-dealers, Farmers and Business men generally. Prices, post-paid, as follows: No. 1. Bound in waterproof leatherette, 50 cents. No. 2. Fine artificial leather, with pocket, silicate slate and account book, 75 cents. No. 3. American Russia or Morocco, with pocket, slate and renewable account book, \$1.00. Address,

E. HARRISON CAWKER,

Publisher United States Miller, Milwaukee, Wis.

NEW YORK BELTING & PACKING CO Limited.



15 PARK ROW, - NEW YORK.

Oldest and Largest Manufacturers in the U. S. of

Vulcanized Rubber Fabrics

FOR MECHANICAL PURPOSES.

Rubber Mats, Rubber Matting and Stair Treads.

RUBBER BELTING, PACKING AND HOSE.

SALESROOMS:

ATLANTA, 16 Decatur St.
BALTIMORE, 12 North Charles St.
BOSTON, 5a Summer St.
BUFFALO, 124-128 Washington St.
CHARLESTON, 160 Meeting St.CHICAGO, 151 Lake St.
DENVER, 1601-1611 17th St.
DETROIT, 16-24 Woodward Ave.
GRAND RAPIDS, 4 Monroe St.

European Branch, 98 and 100 Queen Victoria St., LONDON, ENGLAND.

KANSAS CITY, 1313 West 12th St.
MINNEAPOLIS, 28 South 2d St.
NEW ORLEANS, 8-12 N Peters St.
PHILADELPHIA, 308 Chestnut St.
ST LOUIS, 616 Locust St.

CAWKER'S

American Flour Mill & Grain Elevator Directory

FOR 1890-1891

It contains: 1. A list of Flour Mills in each State, Territory and Province, with names of owners, P. O. and county; in thousands of instances giving their capacity in barrels per day, kind of power used, etc., also indicating such firms as are supposed to be worth \$10,000 and upwards. Total number of mills given, 17,145.

2. A list of miscellaneous mills, such as Corn, Oatmeal, etc.
3. A list of Millwrights.
4. A list of Grain Elevator Owners and Grain Dealers.

5. A list of well-rated Flour Brokers, Merchants and BAKERS in all parts of the United States and Canada, which has been compiled with extraordinary care, capital and credit being considered in the compilation.

6. A list of Foreign flour and grain importers, secured by our own special correspondents and believed to be thoroughly reliable. In short, it is a complete KEY for reaching the Flour and Grain Trade, enabling ANY department of the trade to reach ANY other desired.

The price is invariably Ten Dollars per copy, on receipt of which it will be sent, post paid, to any part of the world. The complete work only is sold. We do not supply lists for single states. These Directories have been issued every two years since 1878, and have been declared indispensable by the prominent mill-furnishers, flour brokers, millers, etc., of this country and Europe. Address,

E. HARRISON CAWKER,

MILWAUKEE, WIS.

36 & 37 Loan & Trust Building.

Patents for Inventors.

CHAS. E. BROCK,
Solicitor of Patents,
Pacific Building, WASHINGTON, D C

All matters relating to patents promptly and carefully attended to. Cave's filed. Trademarks registered, and Designs patented. Write for particulars. Correspondence in English or German.

EVERYBODY'S PAINT BOOK.

A new work on INDOOR and OUT-DOOR painting which is designed to teach people how to DO THEIR OWN PAINTING and save the expense of a painter. The most practical and valuable work of the kind ever issued. Full directions are given for mixing paints for ALL PURPOSES. Tells all about PAPER HANGING, KALORIMINING, STAINING, VARNISHING, POLISHING, as well as how to RENOVATE FURNITURE, so that it will look as good as new. Tells all about HOUSE-CLEANING. Paints given for making the beautiful SPATTER-WORK pictures in which the ladies are so much interested. Tells how to paint OUT-BUILDINGS, ROOFS, FARM WAGONS, FARM IMPREMENTS and CARRIAGES, as well as how to paint GARDENS, FLOWERS, etc. to imitate GROUND GLASS or make paint for BLACKBOARDS, GRAINING in oak and black walnut, painting in imitation of EBONY! MAHOGANY and ROSEWOOD stain, GILDING, BRONZING and SILVERING. Elegantly printed, beautifully bound. WILL SAVE ITS COST in a short time. Send mail on receipt of price. One Dollar.

ADDRESS.

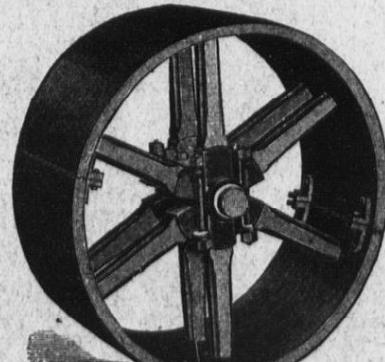
United States Miller and Milling Engineer,
MILWAUKEE WIS.

A. BLOEDEL
106 GRAND AVE.
MILWAUKEE, WIS.

A LARGE STOCK OF
Diamonds, - Watches, - Jewelry, - Silverware,
SPECTACLES, ETC.,
At Reasonable Prices. -

FINE REPAIRING A SPECIALTY.

MENASHA HARDWOOD PULLEYS



We are sole makers of hardwood bent rim, oak spoke arm, iron hub pulleys; gripped to shaft with bolts and using patent paper bushings. They can be put on shaft without taking it down or cutting key seats. No glue or nails used in their construction.

Also sole makers of only small split pulley 1 inch to 8 inches in diameter in the market. They are light, handsome and reliable. Best machine pulley made, and can be taken off or put on in five minutes. See above cut of them. No glue or nails in them. No key seats to cut. Also makers of only Hickory Hangers in the market. They have an iron box and are adjustable, same as an Iron Hanger. Send for circulars and discounts.

MENASHA WOOD-SPLIT PULLEY WORKS,

MENASHA, WIS.

READ
THE NEW YORK
Daily Commercial Bulletin

Its reputation as the most reliable commercial paper is conceded by all.

Sample Copies Free.
Its markets Reports are the most complete and trustworthy of any published and cover all trades.

Save Your Money
by subscribing to the "Daily Commercial Bulletin" and read its reports of the New York Markets.

PRICE:
Daily. \$12 00 Six Mos. \$6 50
Tri-Weekly. 6 75 3 50
Semi-Weekly. 5 00 2 75

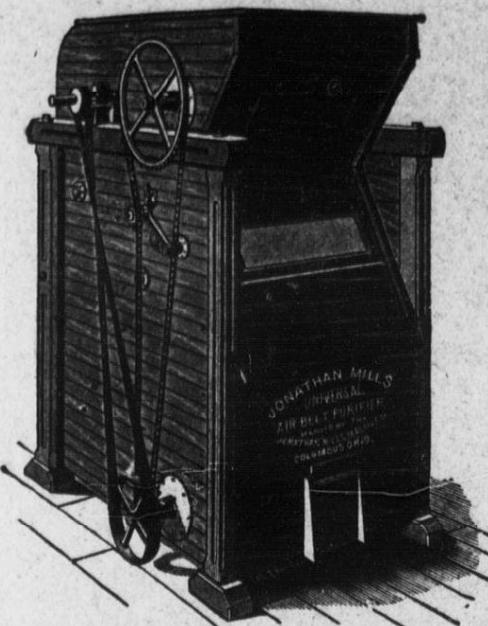
ADDRESS:

New York Daily Bulletin Association,
No. 32 Broadway, - NEW YORK CITY

The INK used on this paper is from
the factory of
CHAS. ENEU JOHNSON & CO.,

PHILADELPHIA, PA.

Western Branch House: 40 La Salle St., CHICAGO



The Jonathan Mills Universal Air Belt Purifier.

Saves Power and Space. Yields Increased. Percentage of Patent Increased. Low Grades Decreased. All Grades of Flour Improved.

Requires no cloth, no dust house, nor dust catchers.

All grades of middlings perfectly purified with absolutely no waste.

In use in many of the representative mills in the country and being rapidly adopted in all sections by all classes and sizes of mills.

Anderson, Ind., March 30, 1891.

The Jonathan Mills Mfg. Co., Columbus, O.

Gentlemen—You will please find our check enclosed for \$... in payment of your bills of Feb. 9 and 11. Please receipt us for same. The Purifiers are working to our entire satisfaction; and the Scalper is a "dandy." We really think this Scalper of yours is one of the most important improvements that has been made in milling machinery for the past 10 years. Wishing you success, we are yours truly,

WELLINGTON, SCHALK & CO.

Indianapolis, Ind., March 8, 1891.

The Jonathan Mills Mfg. Co., Columbus, O.

Gentlemen—We have now been using your Air-Belt Purifiers for six months, and are very well satisfied with them.

They replaced Smith Purifiers. They do better work, take greatly less power, make no dust, and give no trouble. We think them the best Machine yet invented.

Yours truly,
RICHARDSON & EVANS.

Syracuse, N. Y., March 21, 1891.

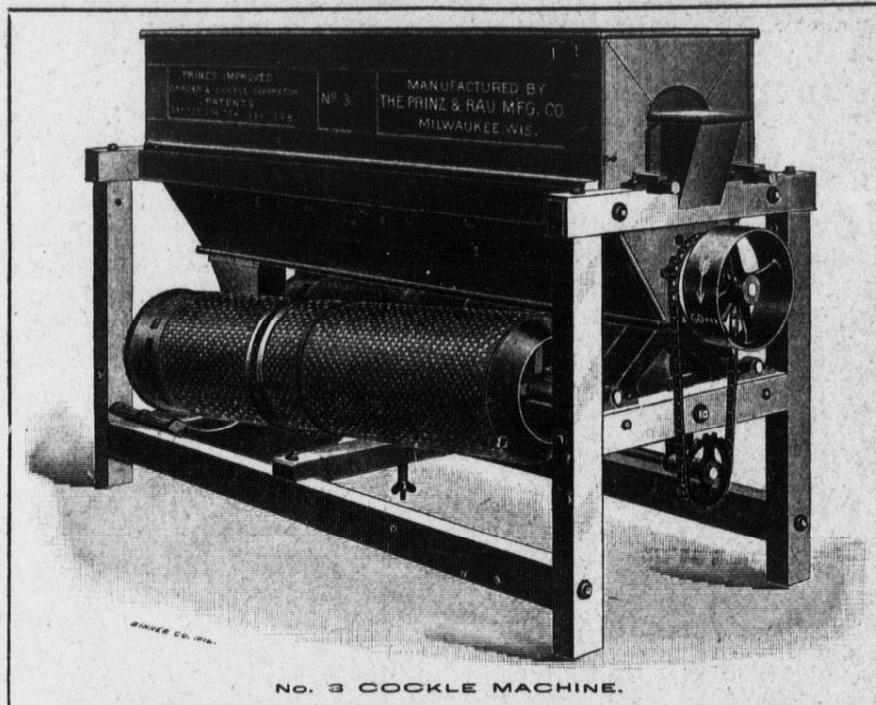
The Jonathan Mills Mfg. Co., Columbus, O.

Gentlemen—You will find enclosed check for \$..., which we cheerfully send you. The Purifier more than meets our expectations, does much better work than we had any idea it would. Our Mr. Lockerbie wrote you a few days ago, and if you will give us the same guarantee on that stock that you did on the other, please send the Machine along at once, as we cannot afford to be without it. Yours truly,

JACOB AMOS.

THE JONATHAN MILLS MFG. CO. COLUMBUS, OHIO, U. S. A.

Write us for particulars and references.



NO. 3 COCKLE MACHINE.

THE “PRINZ” PATENT IMPROVED COCKLE MACHINES

Immense increase of trade without traveling agents. OUR COMPETITORS GROSSLY ADVERTISING and imitating our STEEL REELS, we have decided to reduce our prices still more. Our Machines are working satisfactorily in the following

BIG MILLS IN MINNEAPOLIS:

Christian Bros. Mill Co.; Minneapolis Flour Mfg. Co.—Standard; Washburn Crosby Co.—“A” Mill; Pillsbury-Washburn Flour Mills Co.—Palisade; Sidle-Fletcher Holmes Co.—Northwestern Mills; Stammits & Schobert—Phoenix; Hinkle, Greenleaf & Co.—Humboldt; D. R. Barber & Son; Pillsbury-Washburn Flour Mills Co.—Anoka Mill; Minneapolis Mill; Holly Mill; Zenith Mill; Pettit Mill.

IN MILWAUKEE:

The Phoenix Mill; the Jupiter Mill; the Gem Mill; the Daisy Mill and the Duluth Mill.

TO BE SURE OF GETTING THE BEST MACHINE BUY THE GENUINE
“PRINZ” IMPROVED STEEL COCKLE REEL.

WRITE FOR CIRCULAR AND REDUCED PRICE LIST TO

THE PRINZ & RAU MFG. CO., MILWAUKEE, WIS.

AFTER
“THE TEST”



DUNLAP
WAS CHOSEN.

WITNESSETH:

THE BRADFORD MILL CO., Cincinnati Ohio:

Gentlemen—Mr. Clark has just given me his order for the Dunlap Bolt, and wants it shipped as soon as possible. Make up and ship with the Bolt a Conveyor as per enclosed sketch. * * *

Respectfully,

FRANK E. NEAR.

THE BRADFORD MILL CO., Cincinnati, Ohio:

Gentlemen—Yours of yesterday received, and I wired you this morning “yes,” as per your instructions. The sketch is all right. Make the Conveyor good and strong.

I told Mr. Near that he need not have cloth sent with the Dunlap Bolt, as I have the one here that was used in the test. I will use same numbers on the new machine.

JAS. F. CLARK.

FARREL FOUNDRY & MACHINE COMPANY

+ ANSONIA, CONN. +

SOLE MANUFACTURERS OF THE CELEBRATED



ANSONIA ROLLS
FOR USE IN ROLLER MILLS.

The general experience of American Millers unites in pronouncing these rolls the very best for Flouring Mill use.

These Rolls are now used in all Leading Flouring Mills

Chilled Rolls for Paper Mills a Specialty.

Mention this paper when you write to us.

Perforated Metals



For Milling and Grain Cleaning Machinery.

EXPORTING MILLERS,

Send for copy of the new edition of the

Riverside Cable Code.

SINGLE COPY, \$3.00.

Address, UNITED STATES MILLER, Milwaukee, Wis.

TRY A “LEFFEL” WHEEL

and get MORE POWER
and use LESS WATER

Write for our New Illustrated Catalogue of 1891.

• THE LEFFEL WATER WHEEL & ENGINE CO. SPRINGFIELD, O., U.S.A. •

“Triumph” Corn Sheller.

CAPACITY
2000 BUSHELS PER DAY.

Shells wet or dry corn.

CHEAPEST AND BEST SHELLER.

PAIGE MFG. CO.

12 Fourth Street, PAINESVILLE, O.

PATENTS J. B. CRALLE & CO.
Washington, D.C.

ILLUSTRATED HAND-BOOK upon application.

Mention this paper.

Experimental - Science

BY GEO. M. HOPKINS.

Interesting Experiments in Every Branch of Physics. Descriptions of Simple and Efficient Apparatus, much of which may be Made at Home. Among Subjects treated are Electricity in all its Branches, Magnetism, Heat, Light, Photography, Microscopy, Optical Illusions, Mechanics, etc. A world of Valuable Information. A Source of Rational Amusement. Superb work for Young and Old.

740 Pages. 680 Illustrations.

PRICE, by mail, postpaid, \$4.00.

Address, UNITED STATES MILLER, Milwaukee, Wis.